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code of federal regulations

Telecommunication

47

PARTS 70 TO 79
Revised as of October 1, 1990

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Telecommunication

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PARTS 70 TO 79

Revised as of October 1, 1990

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AS OF OCTOBER 1, 1990

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Cite this Code: **CFR**

To cite the regulations in this volume use title, part and section number. Thus, 47 CFR 73.1 *refers to title 47, part 73, section 1.*

Explanation

The Code of Federal Regulations is a codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government. The Code is divided into 50 titles which represent broad areas subject to Federal regulation. Each title is divided into chapters which usually bear the name of the issuing agency. Each chapter is further subdivided into parts covering specific regulatory areas.

ISSUE DATES

Each volume of the Code is revised at least once each calendar year and issued on a quarterly basis approximately as follows:

Title 1 through Title 16	as of January 1
Title 17 through Title 27	as of April 1
Title 28 through Title 41	as of July 1
Title 42 through Title 50	as of October 1

The appropriate revision date is printed on the cover of each volume.

LEGAL STATUS

The contents of the Federal Register are required to be judicially noticed (44 U.S.C. 1507). The Code of Federal Regulations is prima facie evidence of the text of the original documents (44 U.S.C. 1510).

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The Paperwork Reduction Act of 1980 (Pub. L. 96-511) requires Federal agencies to display an OMB control number with their information collection request. Many agencies have begun publishing numerous OMB control numbers as amendments to existing regulations in the CFR. These OMB numbers are placed as close as possible to the applicable recordkeeping or reporting requirements.

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REPUBLICATION OF MATERIAL

There are no restrictions on the republication of material appearing in the Code of Federal Regulations.

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For a summary, legal interpretation, or other explanation of any regulation in this volume, contact the issuing agency. Inquiries concerning editing procedures and reference assistance with respect to the Code of Federal Regulations may be addressed to the Director, Office of the Federal Register, National Archives and Records Administration, Washington, DC 20408 (telephone 202-523-3517). Sales are handled exclusively by the Superintendent of Documents, Government Printing Office, Washington, DC 20402 (telephone 202-783-3238).

MARTHA L. GIRARD,
Director,
Office of the Federal Register.

October 1, 1990.

THIS TITLE

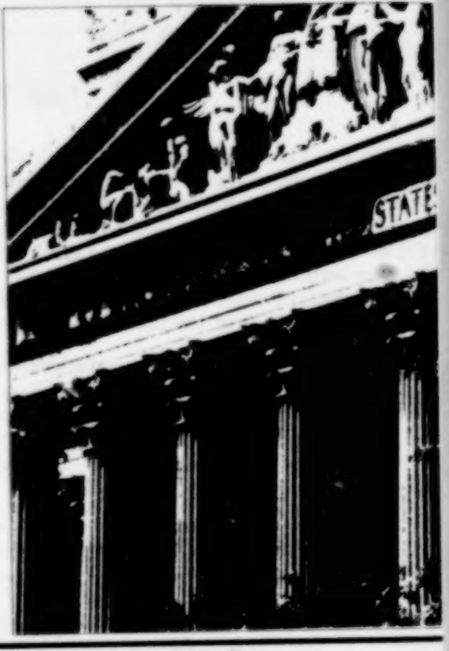
Title 47—TELECOMMUNICATION is composed of five volumes. The parts in these volumes are arranged in the following order: Parts 0-19, Parts 20-39, Parts 40-69, Parts 70-79, and Part 80 to End, Chapter I—Federal Communications Commission. The last volume, Part 80 to End, also includes Chapter II—Office of Science and Technology Policy and National Security Council, and Chapter III—National Telecommunications and Information Administration, Department of Commerce. The contents of these volumes represent all current regulations codified under this title of the CFR as of October 1, 1990.

Part 73 contains a numerical designation of FM broadcast channels (§ 73.201) and a table of FM allotments designated for use in communities in the United States, its territories, and possessions (§ 73.202). Part 73 also contains a numerical designation of television channels (§ 73.603) and a table of channel assignments to listed communities in the United States, its territories, and possessions (§ 73.606).

The OMB control numbers for the Federal Communications Commission, appear in § 0.408 of Chapter I. For the convenience of the user § 0.408 is reprinted in the Finding Aids section of the second, third, fourth, and fifth volumes.

Redesignation tables for Chapter I—Federal Communications Commission appear in the Finding Aids section of the two volumes containing Parts 20-39, and Part 80 to End. A Cross Reference table appears in the Finding Aids section of the volume containing Part 80 to End.

For this volume Jim Wickliffe was Chief Editor. The Code of Federal Regulations publication program is under the direction of Richard L. Claypoole, assisted by Alomha S. Morris.



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ALPHABETICAL INDEX—PART 73

AUTHORITY: 47 U.S.C. 154, 303.

Subpart A—AM Broadcast Stations

§ 73.1 Scope.

This subpart contains those rules which apply exclusively to the AM broadcast service and are in addition to those rules in Subpart H which are common to all AM, FM and TV broadcast services, commercial and noncommercial.

[47 FR 8587, Mar. 1, 1982]

§ 73.14 AM broadcast definitions.

AM broadcast band. The band of frequencies extending from 535 to 1605 kHz.

AM broadcast channel. The band of frequencies occupied by the carrier and the upper and lower sidebands of an AM broadcast signal with the carrier frequency at the center. Channels are designated by their assigned carrier frequencies. The 107 carrier frequencies assigned to AM broadcast stations begin at 540 kHz and are in successive steps of 10 kHz to 1600 kHz.

NOTE: See § 73.21 for the classification of AM broadcast channels.

AM broadcast station. A broadcast station licensed for the dissemination of radio communications intended to be received by the public and operated on a channel in the band 535-1605 kilohertz (kHz). The term "AM broadcast" is synonymous with the term "standard broadcast" as may appear elsewhere in this chapter.

Amplitude modulated stage. The radio-frequency stage to which the modulator is coupled and in which the carrier wave is modulated in accordance with the system of amplitude modulation and the characteristics of the modulating wave.

Amplitude modulator stage. The last amplifier stage of the modulating wave amplitude modulates a radio-frequency stage.

Antenna current. The radio-frequency current in the antenna with no modulation.

Antenna input power. The product of the square of the antenna current and the antenna resistance at the point where the current is measured.

Antenna resistance. The total resistance of the transmitting antenna system at the operating frequency and at the point at which the antenna current is measured.

Blanketing. The interference which is caused by the presence of an AM broadcast signal of one volt per meter (V/m) or greater strengths in the area adjacent to the antenna of the transmitting station. The 1 V/m contour is referred to as the blanket contour and the area within this contour is referred to as the blanket area.

Carrier-amplitude regulation (Carrier shift). The change in amplitude of the carrier wave in an amplitude-modulated transmitter when modulation is applied under conditions of symmetrical modulation.

Combined audio harmonics. The arithmetical sum of the amplitudes of all the separate harmonic components. Root sum square harmonic readings may be accepted under conditions prescribed by the FCC.

Critical directional antenna. An AM broadcast directional antenna that is required, by the terms of a station authorization, to be operated with the relative currents and phases within the antenna elements at closer tolerances of deviation than those permitted under § 73.62 and observed with a high precision monitor capable of measuring these parameters.

Critical hours. The two hour period immediately following local sunrise and the two hour period immediately preceding local sunset.

Daytime. The period of time between local sunrise and local sunset.

Dominant station. A Class I station, as defined in § 73.21.

Effective field; Effective field strength. The root-mean-square (RMS) value of the inverse distance fields at a distance of 1 kilometer from the antenna in all directions in the horizontal plane. The term "field strength" is synonymous with the term "field intensity" as contained elsewhere in this Part.

Equipment performance measurements. The measurements performed to determine the overall performance characteristics of a broadcast transmission system from point of program origination at main studio to sampling of signal as radiated. (See § 73.1590)

Experimental period. the time between 12 midnight local time and local sunrise, used by AM stations for tests, maintenance and experimentation.

Frequency departure. The amount of variation of a carrier frequency or center frequency from its assigned value.

Incidental phase modulation. The peak phase deviation (in radians) resulting from the process of amplitude modulation.

Input power. Means the product of the direct voltage applied to the last radio stage and the total direct current flowing to the last radio stage, measured without modulation.

Intermittent service area. Means the area receiving service from the groundwave of a broadcast station but beyond the primary service area and subject to some interference and fading.

Last radio stage. The radio-frequency power amplifier stage which supplies power to the antenna.

Left (or right) signal. The electrical output of a microphone or combination of microphones placed so as to convey the intensity, time, and location of sounds originated predominately to the listener's left (or right) of the center of the performing area.

Left (or right) stereophonic channel. The left (or right) signal as electrically reproduced in reception of AM stereophonic broadcasts.

Main channel. The band of audio frequencies from 50 to 15,000 Hz which amplitude modulates the carrier.

Maximum percentage of modulation. The greatest percentage of modulation that may be obtained by a transmitter without producing in its output harmonics of the modulating frequency in excess of those permitted by these regulations.

Maximum rated carrier power. The maximum power at which the transmitter can be operated satisfactorily and is determined by the design of the transmitter and the type and number of vacuum tubes or other amplifier devices used in the last radio stage.

Nighttime. The period of time between local sunset and local sunrise.

Nominal power. The antenna input power less any power loss through a dissipative network and, for directional antennas, without consideration of adjustments specified in paragraphs (b)(1) and (b)(2) of § 73.51 of the rules. However, for AM broadcast applications granted or filed before June 3, 1985, nominal power is specified in a system of classifications which include the following values: 50 kW, 25 kW, 10 kW, 5 kW, 2.5 kW, 1 kW, 0.5 kW, and 0.25 kW. The specified nominal power for any station in this group of stations will be retained until action is taken on or after June 3, 1985, which involves a change in the technical facilities of the station.

Percentage modulation (amplitude)

In a positive direction:

$$M = \frac{MAX\text{-}C \times 100}{c}$$

In a negative direction:

$$M = \frac{C\text{-}MIN \times 100}{c}$$

Where:

M = Modulation level in percent.

MAX = Instantaneous maximum level of the modulated radio frequency envelope.

MIN = Instantaneous minimum level of the modulated radio frequency envelope.

C = (Carrier) level of radio frequency envelope without modulation.

Plate modulation. The modulation produced by introduction of the modulating wave into the plate circuit of any tube in which the carrier frequency wave is present.

Primary service area. Means the service area of a broadcast station in which the groundwave is not subject to objectionable interference or objectionable fading.

Proof of performance measurements or antenna proof of performance measurements. The measurements of field strengths made to determine the radiation pattern or characteristics of an AM directional antenna system.

Secondary service area. Means the service area of a broadcast station served by the skywave and not subject to objectionable interference and in which the signal is subject to intermittent variations in strength.

Secondary AM station. Any AM station, except a Class I station, operating on a Class I frequency.

Stereophonic channel. The band of audio frequencies from 50 to 15,000 Hz containing the stereophonic information which modulates the radio frequency carrier.

Stereophonic crosstalk. An undesired signal occurring in the main channel from modulation of the stereophonic channel or that occurring in the stereophonic channel from modulation of the main channel.

Stereophonic pilot tone. An audio tone of fixed or variable frequency modulating the carrier during the transmission of stereophonic programs.

Stereophonic separation. The ratio of the electrical signal caused in the right (or left) stereophonic channel to the electrical signal caused in the left (or right) stereophonic channel by the transmission of only a right (or left) signal.

Sunrise and sunset. For each particular location and during any particular month, the time of sunrise and sunset as specified in the instrument of authorization (See § 73.1209).

White area. The area or population which does not receive interference-free primary service from an authorized AM station or does not receive a signal strength of at least 1 mV/m from an authorized FM station.

[47 FR 8587, Mar. 1, 1982, as amended at 47 FR 13164, Mar. 29, 1982; 47 FR 13812, Apr. 1, 1982; 50 FR 18821, May 2, 1985; 50 FR 47054, Nov. 14, 1985]

§ 73.21 Classes of AM broadcast channels and stations.

(a) *Clear channel.* A clear channel is one on which the dominant station or stations render service over wide areas, and which are cleared of objectionable interference within their primary service areas and over all or a substantial portion of their secondary service areas. Stations operating on these channels are classified as follows:

(1) *Class I station.* A class I station is a dominant station operating on a clear channel and designed to render primary and secondary service over an extended area and at relatively long distances. Its primary service area is free from objectionable interference from other stations on the same and adjacent channels, and its secondary service area free from interference except from stations on adjacent channels, and from stations on the same channel in accordance with the channel designation in § 73.25 or § 73.182. The operating power shall not be less than 10 kW nor more than 50 kW. (Also see § 73.25(a) for further power limitation.)

(2) *Class II station.* A class II station is a secondary station which operates on a clear channel (see § 73.25) and is designed to render service over a primary service area which is limited by and subject to such interference as may be received from Class I stations. Whenever necessary a Class II station shall use a directional antenna or other means to avoid interference with Class I stations and with other Class II stations, in accordance with § 73.182 (and § 73.22 in the case of Class II-A stations). Class II stations are divided into five groups:

(i) *Class II-A station.* A Class II-A station is an unlimited time Class II station operating on one of the clear channels listed in § 73.22 and assigned to a community within a state specified in the Table contained in that section. A Class II-A station shall operate with power of not less than 10 kW nighttime nor more than 50 kW at any time.

(ii) *Class II-B station.* A Class II-B station is an unlimited time Class II station other than those included in Class II-A, II-C, and II-S. Except as subparagraphs (a)(2)(ii) (A) and (B) of this section provide otherwise, a Class II-B station shall operate with a power not less than 0.25 kW nor more than 50 kW. A former Class III-D station operating on 940 or 1550 kHz that is authorized to operate during nighttime hours will be reclassified as Class II-B notwithstanding the fact that its authorized nighttime power is less than 0.25 kW, if its RMS field strength at 1 kilometer is 141 mV/m or higher.

(A) Class II-B stations authorized before June 1, 1980, to operate on any of the 25 Class I channels listed in § 73.25(a) shall operate with the powers authorized as of June 1, 1980, or such other power as the Commission may subsequently authorize. Class II-B stations on these channels authorized after June 1, 1980, in the contiguous 48 states, must meet the requirements for primary service set out in § 73.37(d)(2)(i).

(B) Class II-B stations authorized before June 3, 1985, to operate on any of the 14 channels listed in § 73.25(c) shall operate with the powers authorized as of June 3, 1985, or such other power as the Commission may subsequently authorize.

(C) The nighttime power of Class II-B stations which are authorized after June 1, 1980, to operate in any of the contiguous 48 states on any of the Class I channels listed in § 73.25(a), and which do not meet the requirements for primary service set out in § 73.37(e)(2)(i), shall not exceed 1 kW.

(D) Class II-B stations which are authorized after June 1, 1980, to operate in any of the contiguous 48 states on any of the Class I channels listed in § 73.25(a), and which meet the requirements for primary service set out in § 73.37(e)(2)(i), shall operate with power not less than 250 watts nor more than 50 kW.

NOTE: The Class II station operating unlimited time on 760 kc/s at San Diego, Calif., shall be limited to a power of 5 kW and the Class II station operating unlimited time on 750 KHz at Anchorage, Alaska, shall be limited to a power of 10 kW. Both stations shall protect the I-A station on the same frequency to its 0.5 mV/m 50 percent skywave contour.

(iii) *Class II-C station.* A Class II-C station is an unlimited time Class II station which operates with a daytime power of not less than 0.25 kW nor more than 50 kW and a nighttime power of not less than 0.25 kW nor more than 1 kW as follows:

(A) Class II-C stations authorized after June 1, 1980, on the 25 channels listed in § 73.25(a) are those which do not meet the requirements for primary service set out in § 73.37(e)(2)(i).

(B) Class II-C stations authorized after June 3, 1985, on the 14 channels listed in § 73.25(c) or which operate for the first time on one of such channels after that date.

(iv) *Class II-D stations.* A Class II-D station is a Class II station operating daytime or limited time. A Class II-D station shall operate with power not less than 0.25 kW nor more than 50 kW. No application will be accepted for new Class II-D (daytime-only) stations on 940 kHz or 1550 kHz. No application will be accepted for new Class II-D (daytime-only) stations.

(v) *Class II-S Stations.* Class II-S stations are former Class II-D stations that have been authorized to operate nighttime on the 14 channels listed in § 73.25(c) or on 940 kHz or 1550 kHz, at powers that are less than 0.25 kW; provided that, if the nighttime power of such a station on 940 or 1550 kHz, although less than 0.25 is sufficient to enable its RMS field strength at 1 kilometer to attain the level of 141 mV/m or more, it shall be classified as a Class II-B station. Class II-S stations operate without protection from interference at night, but do receive protection from interference during the daytime.

(b) *Regional Channel.* A regional channel is one on which several stations may operate with powers set out in (1), (2), and (3) of this paragraph (b). The service area of a station operating on a regional channel may be limited to a given field strength contour as a result of interference.

(1) *Class III stations.* A station designated as Class III operates unlimited-time on a regional channel, and is designed to render service B primarily to a principal center of population and in the rural area continguous thereto. Except as provided in paragraph (b)(2) of this section, a Class III station operates with a power not more than 5 kW and not less than 0.25 kW; provided that, an unlimited-time station that operates on a regional channel during nighttime hours with a power of less than 0.25 kW will nevertheless be classified as Class III station if its RMS field strength is 141 mV/m or more at 1 kilometer.

(2) Class III stations in Alaska, Hawaii, Puerto Rico, and the U.S. Virgin Islands are permitted a maximum power of 50 kW day or night. Until the North American Regional Broadcasting Agreement (NARBA) is terminated with respect to the Bahama Islands and the Dominican Republic, radiation toward those countries, respectively, from a Class III station in Puerto Rico or the Virgin Islands may not exceed the level that would be produced by an omni-directional antenna with a transmitter power of 5 kW, or such lower level as will comply with NARBA requirements for protection of stations in the Bahama Islands and the Dominican

Republic against objectionable interference.

(3) *Class III-S Station.* A Class III-S station is a former daytime-only station that operates on a regional channel with a nighttime power that is both less than 0.25 kW and insufficient to enable the station to attain an RMS field strength of at least 141 mV/m or more at 1 kilometer.

(c) *Local channel.* A local channel is one on which several stations operate unlimited time with powers no greater than provided in this paragraph. The primary service area of a station operating on a local channel may be reduced as a consequence of interference. Such stations operate with power no greater than 1 kW daytime or nighttime.

(1) *Class IV station.* A class IV station is a station operating on a local channel and designed to render service primarily to a community and the suburban and rural areas contiguous thereto. The power of a station of this class shall not be less than 0.25 kW, nor more than 1 kW, and its primary service area is subject to interference in accordance with § 73.182. Stations which are licensed to operate with 0.1 kW may continue to do so.

NOTE 1: All authorizations of new or changed Class I-B, Class II-D, Class III, or Class IV facilities after October 30, 1961, are subject to whatever interference may be received from, or whatever overlap of 2.0 mV/m and 25 mV/m groundwave contours or overlap of 25 mV/m groundwave countours may be involved with, previously or subsequently authorized Class II-A facilities.

NOTE 2: The following table indicates the international classes of AM broadcasting stations with which the domestic classes of stations set out in the previous paragraphs of this section correspond:

INTERNATIONAL AND DOMESTIC CLASSIFICATIONS OF STATIONS AND CHANNELS

International classes of AM stations	Corresponding U.S. classes of AM stations	Classes of Channels available in U.S. for each class of station
Class A	I-A	Clear channels.
	I-B	Do.
	I-N	Do.
Class B	II	Do.
	II-A	Do.
	II-B	Do.
	II-C	Do.
	II-D	Do.
	II-S	Do.
	III	Regional channels.
	III-S	Do.
Class C	IV	Local channels.

[28 FR 13574, Dec. 14, 1963]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 73.21, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 73.22 Assignment of Class II-A stations.

(a) *Table of assignment.* One Class II-A station may be assigned on each channel listed in the following table within the designated State or States:

Channel (Kilohertz)	Location of existing class I station	State(s) in which class II-A assignment may be applied for
670	Chicago, Ill	Idaho.
720	do	Nevada or Idaho.
770	New York, N.Y	New Mexico.
780	Chicago, Ill	Nevada.
880	New York, N.Y	North Dakota, South Dakota, or Nebraska.
890	Chicago, Ill	Utah.
1020	Pittsburgh, Pa	New Mexico.
1030	Boston, Mass	Wyoming.
1100	Cleveland, Ohio	Colorado.
1120	St. Louis, Mo	California or Oregon.
1180	Rochester, N.Y	Montana.
1210	Philadelphia, Pa	Kansas, Nebraska, or Oklahoma.

(b) *Minimum service to "white" areas.* No Class II-A station shall be assigned unless at least 25 percent of its nighttime interference-free service area or at least 25 percent of the population residing therein receives no other interference-free nighttime primary service.

(c) *Power.* Class II-A stations shall operate with not less than 10 kW power nighttime.

(d) *Protection*—(1) *Protection by Class II-A stations to other stations.* The co-channel Class I-A station shall be protected by the Class II-A station to its 0.1 mV/m contour daytime and its 0.5 mV/m 50 percent skywave contour nighttime. A co-channel Class I-N station shall be protected to its 0.1 mV/m contour daytime and its 0.1 mV/m 50% skywave contour nighttime. The 0.1 mV/m groundwave contour of a Class I-N station is to be protected in those azimuths in which the Class I-N station does not develop a 0.1 mV/m 50% skywave signal. All other stations of any class authorized on or before October 30, 1961, shall normally receive protection from objectionable interference from Class II-A stations as provided in § 73.182.

(2) *Protection to Class II-A stations.* A Class II-A station shall normally receive daytime protection to its 0.5 mV/m groundwave contour and nighttime protection to the contour to which it is limited by the co-channel Class I-A station.

(e) *Applications not complying with this section.* Applications for Class II-A stations which do not meet the requirements of paragraphs (b) and (c) of this section will be returned without further consideration.

[28 FR 13574, Dec. 14, 1963, as amended at 41 FR 18425, May 4, 1976; 49 FR 43960, Nov. 11, 1984]

§ 73.24 Broadcast facilities; showing required.

An authorization for a new AM broadcast station or increase in facilities of an existing station will be issued only after a satisfactory showing has been made in regard to the following, among others:

(a) That the proposed assignment will tend to effect a fair, efficient, and equitable distribution of radio service among the several states and communities.

(b) That a proposed new station (or a proposed change in the facilities of an authorized station) complies with the pertinent requirements of § 73.37 of this chapter.

NOTE: With respect to new Class II-A stations or to stations for which applications were accepted for filing before July 13, 1964, the provisions of NOTE 1 of § 73.37 of this chapter shall apply. Special provisions concerning interference from Class II-A to stations of other classes authorized after October 30, 1961, are contained in § 73.22(d) of this chapter and NOTE 3 to § 73.21 of this chapter. The level of interference shall be computed pursuant to §§ 73.182 and 73.186 of this chapter.

(c) That the applicant is financially qualified to construct and operate the proposed station.

(d) That the applicant is legally qualified. That the applicant (or the person or persons in control of an applicant corporation or other organization) is of good character and possesses other qualifications sufficient to provide a satisfactory public service.

(e) That the technical equipment proposed, the location of the transmitter, and other technical phases of operation comply with the regulations governing the same, and the requirements of good engineering practice. (See technical regulations of this subpart and § 73.188.)

(f) That the facilities sought are subject to assignment as requested under existing international agreements and the rules and regulations of the Commission.

(g) That the population within the 1 V/m contour does not exceed 1.0 percent of the population within the 25 mV/m contour: *Provided, however,* That where the number of persons within the 1 V/m contour is 300 or less the provisions of this paragraph are not applicable.

(h) That, in the case of an applications for a Class II station, the proposed station would radiate, during two hours following local sunrise and two hours preceding local sunset, in any direction toward the 0.1 mV/m groundwave contour of a co-channel United States Class I-A or I-B station, no more than the maximum radiation values permitted under the provisions of § 73.187.

(i) That, in the case of an application for a Class II-A station (see § 73.22), 25 percent or more of the area or population within the nighttime interference-free service contour of the proposed station receives no nighttime interference-free primary service from another station.

(j) The 5 mV/m contour (or, at night, the interference-free contour, if of a higher field strength) encompasses the entire principal community to be served. The following categories of stations need not demonstrate the ability to provide such coverage during nighttime operation: (1) Daytime-only AM stations; and (2) former daytime-only stations that were reclassified as Class II-B or II-S on 940 or 1550 kHz or as Class II-C of II-S on the 14 frequencies listed in § 74.25(c) or as unlimited-time Class III or III-S stations or regional channels, and have not since been authorized to increase nighttime power.

(k) That the public interest, convenience, and necessity will be served through the operation under the proposed assignment.

[28 FR 13574, Dec. 14, 1963, as amended at 38 FR 5874, Mar. 5, 1973; 49 FR 43960, Nov. 1, 1984; 50 FR 40014, Oct. 1, 1985; 52 FR 11654, Apr. 10, 1987; 53 FR 1031, Jan. 15, 1988]

§ 73.25 Clear channels; Classes I and II stations.

The frequencies in the following tabulations are designated as clear channels and assigned for use by the Classes of stations given:

(a) On each of the following channels, one Class I-A station will be assigned, operating with power of 50 kW: 640, 650, 660, 670, 700, 720, 750, 760, 770, 780, 820, 830, 840, 870, 880, 890, 1020, 1030, 1040, 1100, 1120, 1160, 1180, 1200, and 1210 kHz. In Alaska, these frequencies can be used by Class I-N stations subject to the conditions set forth in § 73.182(a)(1)(iii). In addition, on the channels listed in this paragraph, Class II stations may be assigned as follows:

(1) On 670, 720, 770, 780, 880, 890, 1020, 1030, 1100, 1120, 1180, and 1210 kHz, one Class II-A unlimited time station, assigned and located pursuant to the provisions of § 73.22, and

(2) On any of the 25 channels listed at the beginning of this paragraph:

(i) The unlimited time, limited time, daytime-only, specified hours, and time-sharing Class II stations authorized prior to June 1, 1980, to operate on those channels; and

(ii) Additional unlimited time Class II-B and II-C stations authorized after June 1, 1980.

(iii) Additional daytime-only class II stations whose transmitter sites are located inside the 0.5mV/m 50% nighttime contour of the respective co-channel Class I-A stations.

(b) To each of the following channels there may be assigned Class I and Class II stations: 680, 710, 810, 850, 940, 1000, 1060, 1070, 1080, 1090, 1110, 1130, 1140, 1170, 1190, 1500, 1510, 1520, 1530, 1540, 1550, and 1560 kHz.

NOTE: Until superseded by a new agreement, protection of the Bahama Islands shall be in accordance with NARBA. Accordingly, Class I and Class II stations on 1540 kHz shall deliver not over 4 uV/m groundwave or 25 uV/m skywave at any point of land in the Bahama Islands and such stations operating nighttime (i.e., sunset to sunrise at the location of the U.S. station) shall be located not less than 650 miles from the nearest point of land in the Bahama Islands. Also see paragraph (c) for additional provisions relating to Class II stations on this frequency.

(c) For Class II stations on 540, 690, 730, 740, 800, 860, 900, 990, 1010, 1050, 1220, 1540, 1570, and 1580 kHz.

[28 FR 13574, Dec. 14, 1963, as amended at 33 FR 4410, Mar. 12, 1968; 35 FR 18052, Nov. 25, 1970; 47 FR 27862, June 28, 1982; 49 FR 43960, Nov. 1, 1984; 50 FR 24520, June 11, 1985; 52 FR 47568, Dec. 15, 1987; 53 FR 1031, Jan. 15, 1988; 54 FR 39736, Sept. 28, 1989]

§ 73.26 Regional channels; Class III stations.

(a) The following frequencies are designated as regional channels and are assigned for use by Class III and Class III-S stations: 550, 560, 570, 580, 590, 600, 610, 620, 630, 790, 910, 920, 930, 950, 960, 970, 980, 1150, 1250, 1260, 1270, 1280, 1290, 1300, 1310, 1320, 1330, 1350, 1360, 1370, 1380, 1390, 1410, 1420, 1430, 1440, 1460, 1470, 1480, 1590 and 1600 kHz.

(b) Additionally, in Alaska, Hawaii, Puerto Rico, and the U.S. Virgin Islands the frequencies 1230, 1240, 1340, 1400, 1450, and 1490 kHz are designated as Regional channels, and are assigned for use by Class III stations. Stations formerly licensed to these channels in those locations as Class IV stations are redesignated as Class III stations.

(c) No application for new daytime-only stations will be accepted on the channels listed in paragraph (a) of this section.

[51 FR 4752, Feb. 7, 1986, as amended at 51 FR 32088, Sept. 9, 1986; 53 FR 1031, Jan. 15, 1988]

§ 73.27 Local channels; Class IV stations.

Within the conterminous 48 states, the following frequencies are designated as local channels, and are assigned for use there by Class IV stations: 1230, 1240, 1340, 1400, 1450 and 1490 kHz.

[51 FR 4752, Feb. 7, 1986]

§ 73.28 Assignment of stations to channels.

(a) With respect to applications for new Class II-A stations, and other applications accepted for filing before July 13, 1964, the individual assignments of stations to channels which may cause interference to other United States stations only shall be made in accordance with the provisions of this part for the respective classes of stations involved. (For determining objectionable interference, see §§ 73.22, and 73.182 through 73.186.)

(b) The Commission will not make an AM station assignment that does not conform with international requirements and restrictions on spectrum use that the United States has accepted as a signatory to treaties, conventions, and other international agreements. See § 73.1650 for a list of pertinent treaties, conventions and agreements, and § 73.3570 for procedural provisions relating to compliance with them.

(c) Engineering standards now in force domestically differ in some respects from those specified for international purposes. The engineering standards specified for international purposes (see § 73.1650, International Agreements) will be used to determine:

(1) The extent to which interference might be caused by a proposed station in the United States to a station in another country; and

(2) whether the United States should register an objection to any new or changed assignment notified by another country. The domestic standards in effect in the United States will be used to determine the extent to which interference exists or would exist from a foreign station where the value of such interference enters into a calculation of:

(i) The service to be rendered by a proposed operation in the United States; or

(ii) the permissible interfering signal from one station in the United States to another United States station.

[28 FR 13574, Dec. 14, 1963, as amended at 29 FR 9499, July 11, 1964; 49 FR 32358, Aug. 14, 1984; 50 FR 18821, May 2, 1985; 54 FR 39736, Sept. 28, 1989]

§ 73.29 Class IV stations on regional channels.

No license will be granted for the operation of a Class IV station on a regional channel.

[53 FR 1031, Jan. 15, 1988]

§ 73.31 Rounding of nominal power specified on applications.

(a) An application filed with the FCC for a new station or for an increase in power of an existing station shall specify nominal power rounded to two significant figures as follows:

Nominal power (kW)	Rounded down to nearest figure (kW)
Below 0.25	0.001
0.25 to 0.99	0.01
1 to 9.9	0.1
10 to 50	1

(b) In rounding the nominal power in accordance with paragraph (a) of this section the RMS shall be adjusted accordingly. If rounding upward to the nearest figure would result in objectionable interference, the nominal power specified on the application is to be rounded downward to the next nearest figure and the RMS adjusted accordingly.

[50 FR 18821, May 2, 1985, as amended at 53 FR 1031, Jan. 15, 1988]

73.33 Antenna systems; showing required.

(a) An application for authority to install a broadcast antenna shall specify a definite site and include full details of the antenna design and expected performance.

(b) All data necessary to show compliance with the terms and conditions of the construction permit must be filed with the license application. If the station is using a directional antenna, a proof of performance must also be filed.

[28 FR 13574, Dec. 14, 1963, as amended at 37 FR 25840, Dec. 5, 1972]

§ 73.37 Applications for broadcast facilities, showing required.

(a) Except as indicated in other paragraphs of this section, no application will be accepted for a new station (or change in frequency of an existing station) if the proposed operation would involve overlap of signal strength contours with any other station as set forth below in this paragraph; and no application will be accepted for a change (other than a change in frequency) of the facilities of an existing station (including the daytime facilities of an existing Class II-A station) if the proposed change would involve such overlap where there is not already such overlap between the stations involved:

Frequency separation	Contour of proposed new station (classes II-B, II-C, II-D, II-S, III, and IV) mV/m	Contour of any other station
Co-channel	0.005	0.1 mV/m (Class I).
	0.025	0.5 mV/m (other classes).
	0.5	0.025 mV/m (All classes).
10 kHz	0.5	0.5 mV/m (All classes).
20 kHz	2	25 mV/m (All classes).
	25	2 mV/m (All classes).
30 kHz	25	25 mV/m (All classes).

(b) An application for a new daytime station or a change in the daytime facilities of an existing station may be granted notwithstanding overlap of the proposed 0.5 mV/m contour and the 0.025 mV/m contour of another co-channel station, where the applicant station is or would be the first AM broadcast facility in a community of any size wholly outside of an urbanized area or the first AM broadcast facility in a community of 25,000 or more population wholly or partly within an urbanized area [for the purpose of this rule, urbanized area refers to such areas listed by the latest Census provided they also contain an incorporated place of at least 50,000 population], or when the facilities proposed would provide a first primary service to at least 25 percent of the interference-free area within the proposed 0.5 mV/m contour, provided that:

(1) The proposal complies with paragraph (a) of this section in all other respects and is consistent with all other provisions of this part; and

(2) No overlap would occur between the 1 mV/m contour of the proposed facilities and the 0.05 mV/m contour of any co-channel station.

(c) In determining overlap received, an application for a new Class IV station with daytime power of 250 watts, or greater, shall be considered on the assumption that both the proposed operation and all existing Class IV stations operate with 250 watts and utilize non-directional antennas. With respect to applications for new Class IV facilities, the provisions of paragraph (b) of this section shall be applied using the assumption mentioned in this paragraph for determining overlap received.

(d) If otherwise consistent with the public interest and subject to section 316 of the Communications Act, an application requesting an increase in the daytime power of an existing Class IV station on a local channel from 250 watts to a maximum of one kW, or from 100 watts to a maximum of 500 watts, may be granted notwithstanding overlap prohibited by paragraph (a) of this section. In the case of a 100 watt Class IV station increasing daytime power, the provisions of this paragraph shall not be construed to permit an increase in power to more than 500 watts, if prohibited overlap would be involved, even if successive applications should be tendered.

(e) In addition to a demonstration of compliance with the requirement of paragraphs (a), and as appropriate, (b), (c) and (d) of this section, an application for a new AM broadcast station, or for a major change (see § 73.3571(a)(1) of this Chapter) in an authorized AM broadcast station, as a condition for its acceptance, shall make a satisfactory showing, if new or modified nighttime operation by a Class II or Class III station is proposed, that objectionable interference will not result to an authorized station as determined pursuant to § 73.182(1) of this chapter.

(f) Applications for new or changed facilities in the states of Alaska and Hawaii, in the Commonwealth of Puerto Rico, and in the territories of the Virgin Islands, Guam, and American Samoa will be accepted for filing only if satisfactory showings are submitted with respect to the following:

(1) The proposed operation complies with the requirements of paragraphs (a), (b), (c), and (d) of this section.

(2) Unlimited time operation, by other than a Class IV facility, will not cause objectionable skywave interference at night to an existing station, pursuant to § 73.182(1). In addition, each proposal for unlimited time operation (including Class IV proposals) shall meet at least one of the following conditions:

(i) Not more than 10 percent of the population included within the normally protected nighttime contour would receive objectionable interference.

(ii) The proposed operation would be the first AM broadcast facility assigned to the community which would provide nighttime service.

(iii) For a proposed new station, that at least 25 percent of the area or population included within the nighttime interference-free primary service contour is without nighttime primary AM broadcast service, or, for a proposed change in the nighttime facilities of an authorized station, that at least 25 percent of the area or population which would receive interference-free nighttime primary service from the station for the first time as a result of the change in facilities is without nighttime primary AM broadcast service.

NOTE 1: The foregoing provisions of this section shall not be applied to applications for new Class II-A stations or to applications accepted for filing before July 1, 1964. With respect to such applications, the following shall apply: An authorization will not be granted for a station on a frequency of ±30kHz from that of another station if the area enclosed by the 25 mV/m groundwave contours of the two stations overlap, nor will an authorization be granted for the operation of a station on a frequency ±20 kHz or ±10 kHz from the frequency of another station if the area enclosed by the 25 mV/m groundwave contour of either one overlaps the area enclosed by the 2 mV/m groundwave contour of the other. (As to overlap with Class II-A stations, see § 73.21, Note 3.)

NOTE 2: In the case of applications for changes (other than frequency) in the facilities of AM broadcast stations covered by this section, an application therefor will be accepted even though overlap of signal strength contours as mentioned in this section would occur with another station in an area where such overlap does not already exist, if: (1) The total area of overlap with that station would not be increased; (2) there would be no net increase in the area of overlap with any other station; and (3) there would be created no area of overlap with any station with which overlap does not now exist.

NOTE 3: The provisions of this section concerning prohibited overlap of signal strength contours will not apply where: (1) The area of overlap lies entirely over sea water: or (2) the only overlap involved would be that caused to a foreign station, in which case the provisions of the applicable international agreement, as identified in § 73.1650, will apply. When overlap would be received from a foreign station, the provisions of this section will apply, except where there would be overlap with a foreign station with a frequency separation of 20 kHz. In the latter case the provisions of the international agreement will apply in lieu of this section.

NOTE 4: All applications for new stations, or for major changes in existing stations tendered for filing after July 18, 1968, for facilities in the conterminous United States, shall be subject to the provisions of paragraph (e) of this section, or, for facilities in the States of Alaska and Hawaii, the Commonwealth of Puerto Rico and the territories of the Virgin Islands, Guam, and American Samoa, shall be subject to the provisions of paragraph (f) of this section.

NOTE 5: In determining the number of "authorized" aural transmission facilities in a given community, applications for that community in hearing or otherwise having protected status under specified "cut-off" procedures shall be considered as existing stations. In the event that there are two or more mutually exclusive protected applications seeking authorization for the proposed community it will be assumed that only one is "authorized."

NOTE 6: A "transmission facility" for a community is a station licensed to the community. Such a station provides a "transmission service" for that community.

[29 FR 9499, July 11, 1964]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 73.37, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 73.44 AM transmission system emission limitations.

(a) The emissions of stations in the AM service shall be attenuated in accordance with the requirements specified in paragraph (b) of this section. Emissions shall be measured using a properly operated and suitable swept-frequency RF spectrum analyzer using a peak hold duration of 10 minutes, no video filtering, and a 300 Hz resolution bandwidth, except that a wider resolution bandwidth may be employed above 11.5 kHz to detect transient emissions. Alternatively, other specialized receivers or monitors with appropriate characteristics may be used to determine compliance with the provisions of this section, provided that any disputes over measurement accuracy are resolved in favor of measurements obtained by using a calibrated spectrum analyzer adjusted as set forth above.

(b) Emissions 10.2 kHz to 20 kHz removed from the carrier must be attenuated at least 25 dB below the unmodulated carrier level, emissions 20 kHz to 30 kHz removed from the carrier must be attenuated at least 35 dB below the unmodulated carrier level, emissions 30 kHz to 60 kHz removed from the carrier must be attenuated at least [5 + 1 dB/kHz] below the unmodulated carrier level, and emissions between 60 kHz and 75 kHz of the carrier frequency must be attenuated at least 65 dB below the unmodulated carrier level. Emissions removed by more than 75 kHz must be attenuated at least 43 + 10 Log (Power in watts) or 80 dB below the unmodulated carrier level, whichever is the lesser attenuation, except for transmitters having power less than 158 watts, where the attenuation must be at least 65 dB below carrier level.

(c) Should harmful interference be caused to the reception of other broadcast or non-broadcast stations by out of band emissions, the licensee may be directed to achieve a greater degree of attentuation than specified in paragraphs (a) and (b) of this section.

(d) Measurements to determine compliance with this section for transmitter type acceptance are to be made using signals sampled at the output terminals of the transmitter when operating into an artificial antenna of substantially zero reactance. Measurements made of the emissions of an operating station are to be made at ground level approximately 1 kilometer from the center of the antenna system. When a directional antenna is used, the carrier frequency reference field strength to be used in order of preference shall be:

(1) The measure non-directional field strength.

(2) The RMS field strength determined from the measured directional radiation pattern.

(3) The calculated expected field strength that would be radiated by a non-directional antenna at the station authorized power.

(e) Licensees of stations complying with the ANSI/EIA-549-1988, NRSC-1 AM Preemphasis/Deemphasis and Broadcast Transmission Bandwidth Specifications (NRSC-1), prior to June 30, 1990 or from the original commencement of operation will, until June 30, 1994, be considered to comply with paragraphs (a) and (b) of this section, absent any reason for the Commission to believe otherwise. Such stations are waived from having to make the periodic measurements required in § 73.1590(a)(6) until June 30, 1994. However, licensees must make measurements to determine compliance with paragraphs (a) and (b) of this section upon receipt of an Official Notice of Violation or a Notice of Apparent Liability alleging noncompliance with those provisions, or upon specific request by the Commission.

[47 FR 8588, Mar. 1, 1982, as amended at 49 FR 3999, Feb. 1, 1984]

§ 73.45 AM antenna systems.

(a) All applicants for new, additional, or different AM station facilities and all licensees requesting authority to change the transmitting system site of an existing station must specify an antenna system, the efficiency of which complies with the requirements for the class and power of station. (See §§ 73.186 and 73.189.)

(1) An application for authority to install an AM broadcast antenna must specify a definite site and include full details of the antenna system design and expected performance.

(2) All data necessary to show compliance with the terms and conditions of the construction permit must be filed with the application for the station license to cover the construction. If the station has constructed a directional antenna, a directional proof of performance must be filed. See §§ 73.150 through 73.157.

(b) The simultaneous use of a common antenna or antenna structure by more than one AM station or by a station of any other type or service may be authorized provided:

(1) Engineering data are submitted showing that satisfactory operation of each station will be obtained without adversely affecting the operation of the other station(s).

(2) The minimum field strength for each AM station complies with § 73.189(b).

(c) Should any changes be made or otherwise occur which would possibly alter the resistance of the antenna system, the licensee must commence the determination of the operating power by a method described in § 73.51(a)(1) or (d). (If the changes are due to the construction of FM or TV transmitting facilities, see §§ 73.316 and 73.685.) Upon completion of any necessary repairs or adjustments, or upon completion of authorized construction or modifications, the licensee must make a new determination of the antenna resistance using the procedures described in § 73.54. Operating power should then be determined by a direct method as described in § 73.51. Notification of the value of resistance of the antenna system must be filed with the FCC in Washington, D.C. as follows:

(1) Whenever the measurements show that the antenna or common point resistance differs from that shown on the station authorization by more than 2%, FCC Form 302 must be filed with the information and measurement data specified in § 73.54(d).

(2) Whenever AM stations use direct reading power meters pursuant to § 73.51, notification to the FCC in Washington, DC must be filed in accordance with § 73.54(e).

[43 FR 53735, Nov. 17, 1978, as amended at 45 FR 28141, Apr. 28, 1980; 47 FR 8589, Mar. 1, 1982; 50 FR 32416, Aug. 12, 1985; 51 FR 2707; Jan. 21, 1986; 51 FR 26250, July 22, 1986]

§ 73.49 AM transmission system fencing requirements.

Antenna towers having radio frequency potential at the base (series fed, folded unipole, and insulated base antennas) must be enclosed within effective locked fences or other enclosures. Ready access must be provided to each antenna tower base for meter reading and maintenance purposes at all times. However, individual tower fences need not be installed if the towers are contained within a protective property fence.

[51 FR 2707, Jan. 21, 1986]

§ 73.51 Determining operating power.

(a) Except in those circumstances described in paragraph (d) of this section, the operating power shall be determined by the direct method. The direct method consists of either:

(1) using a suitable instrument for determining the antenna's input power directly from the RF voltage, RF current, and phase angle; or

(2) calculating the product of the licensed antenna or common point resistance at the operating frequency (see § 73.54), and the square of the indicated unmodulated antenna current at that frequency, measured at the point where the resistance has been determined.

(b) The authorized antenna input power for each station shall be equal to the nominal power for such station, with the following exceptions:

(1) For stations with nominal powers of 5 kW, or less, the authorized antenna input power to directional antennas shall exceed the nominal power by 8 percent.

(2) For stations with nominal powers in excess of 5 kW, the authorized antenna input power to directional an-

tennas shall exceed the nominal power by 5.3 percent.

(3) In specific cases, it may be necessary to limit the radiated field to a level below that which would result if normal power were delivered to the antenna. In such cases, excess power may be dissipated in the antenna feed circuit, the transmitter may be operated with power output at a level which is less than the rated carrier power, or a combination of the two methods may be used, subject to the conditions given in paragraph (c) of this section.

(i) Where a dissipative network is employed, the authorized antenna current and resistance, and the authorized antenna input power shall be determined at the input terminals of the dissipative network.

(ii) Where the authorized antenna input power is less than the nominal power, subject to the conditions set forth in paragraph (c) of this section, the transmitter may be operated at the reduced power level necessary to supply the authorized antenna input power.

(c) Applications for authority to operate with antenna input power which is less than nominal power and/or to employ a dissipative network in the antenna system shall be made on FCC Form 302. The technical information supplied on section II-A of this form shall be that applying to the proposed conditions of operation. In addition, the following information shall be furnished, as pertinent:

(1) Full details of any network employed for the purpose of dissipating radio frequency energy otherwise delivered to the antenna (see § 73.54).

(2) A showing that the transmitter has been type accepted or notified for operation at the proposed power output level, or, in lieu thereof:

(i) A full description of the means by which transmitter output power will be reduced.

(ii) Where the proposed transmitter power output level(s) is less than 90% of the rated power of the transmitter, equipment performance measurements must be made to confirm that the station transmissions conform to the emission limitation specified in § 73.44, under all conditions of program operation.

(iii) A showing that, at the proposed power output level, means are provided for varying the transmitter output within a tolerance of ±10 percent, to compensate for variations in line voltage or other factors which may affect the power output level.

(d) When it is not possible or appropriate to use the direct method of power determination due to technical reasons, the indirect method of determining operating power (see paragraphs (e) and (f) of this section) may be used on a temporary basis. A notation must be made in the station log indicating the dates of commencement and termination of measurement using the indirect method of power determination.

(e) The antenna input power is determined indirectly by applying an appropriate factor to the input power to the last radio-frequency power amplifier stage of the transmitter, using the following formula:

Antenna input power $= Ep \times Ip \times F$

Where:

Ep = DC input voltage of final radio stage.

Ip = Total DC input current of final radio stage.

F = Efficiency factor.

(1) If the above formula is not appropriate for the design of the transmitter final amplifier, use a formula specified by the transmitter manufacturer with other appropriate operating parameters.

(2) The value of *F* applicable to each mode of operation must be determined and a record kept thereof with a notation as to its derivation. This factor is to be established by one of the methods described in paragraph (f) of this section and retained in the station records.

(f) The value of *F* is to be determined by one of the following procedures listed in order of preference:

(1) If the station had previously been authorized and operating by determining the antenna input power by the direct method, the factor *F* is the ratio of the antenna input power (determined by the direct method) to the corresponding final radio frequency power amplifier input power.

(2) If a station has not been previously in regular operation with the

power authorized for the period of indirect power determination, if a new transmitter has been installed, or if, for any other reason, the determination of the factor *F* by the method described in paragraph (f)(1) of this section is impracticable:

(i) The factor *F* as shown in the transmitter manufacturer's test report, if such a test report specifies a unique value of *F* for the power level and frequently used; or

(ii) The value determined by reference to the following table:

Factor(F)	Method of modulation	Maximum rated carrier power	Class of amplifier
0.70	Plate	1 kW or less	
.80	Plate	2.5 kW and over	
.35	Low level	0.25 kW and over	B.
.65	Low level	0.25 kW and over	BC[1].
.35	Grid	0.25 kW and over	

[1] All linear amplifier operation where efficiency approaches that of class C operation.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, as amended, 1068, 1082, as amended; 47 U.S.C. 154, 155, 303. Interpret or apply secs. 301, 303, 307, 48 Stat. 1081, 1082, as amended, 47 U.S.C. 301, 303, 307)

[37 FR 7516, Apr. 15, 1972, as amended at 42 FR 36827, July 18, 1977; 42 FR 61863, Dec. 7, 1977; 44 FR 36036, June 20, 1979; 47 FR 28387, June 30, 1982; 48 FR 38477, Aug. 24, 1983; 48 FR 44805, Sept. 30, 1983; 49 FR 3999, Feb. 1, 1984; 49 FR 4210, Feb. 3, 1984; 49 FR 49850, Dec. 24, 1984; 50 FR 24521, June 11, 1985; 52 FR 10570, Apr. 2, 1987]

§ 73.53 Requirements for authorization of antenna monitors.

(a) *General requirements.* (1) Antenna monitors shall be type approved or notifed by the FCC. Effective March 5, 1984, only grants of notification will be issued for antenna monitors.

(2) Notification can be obtained by following the procedures specified in Subpart J of Part 2 of the FCC's Rules.

(b) An antenna monitor eligible for authorization by the FCC shall meet the following specifications:

(1) The monitor shall be designed to operate on a frequency in the band 540 to 1600 kHz.

(2) The monitor shall be capable of indicating any phase difference between two RF voltages of the same frequency over a range of from 0 to 360°.

(3) The monitor shall be capable of indicating the relative amplitude of two RF voltages.

(4) The device used to indicate phase differences shall indicate in degrees, and shall be graduated in increments of 2°, or less. If a digital indicator is provided, the smallest increment shall be 0.5°, or less.

(5) The device used to indicate relative amplitudes shall be graudated in increments which are 1 percent, or less, of the full scale value. If a digital indicator is provided, the smallest increment shall be 0.1 percent, or less, of the full scale value.

(6) The monitor shall be equipped with means, if necessary, to resolve ambiguities in indication.

(7) If the monitor is provided with more than one RF input terminal in addition to a reference input terminal, appropriate switching shall be provided in the monitor so that the signal at each of these RF inputs may be selected separately for comparison with the reference input signal.

(8) Each RF input of the monitor shall provide a termination of such characteristics that, when connected to a sampling line of an impedance specified by the manufacturer the voltage reflection coefficient shall be 3 percent or less.

(9) The monitor, if intended for use by stations operating directional antenna systems by remote control or using extension meters to observe the monitor indications, shall be designed so that the switching functions required by paragraph (c)(7) of this section may be performed from a point external to the monitor and phase and amplitude indications be provided by external meters. The indications of external meters furnished by the manufacturer shall meet the specifications for accuracy and repeatability of the monitor itself, and the connection of these meters to the monitor, or of other indicating instruments with electrical characteristics meeting the specifications of the monitor manufacturer shall not affect adversely the performance of the monitor in any respect. The type approval or notification designations and the instruction manuals for monitors not designated for external switching of the indica-

tions as specified in this Paragraph shall clearly show that the monitors are not acceptable for use at stations using remote control for the operation of directional antennas or extension meters to read and log the monitor indications.

(10) The monitor must be accompanied by complete and correct schematic diagrams and operating instructions when submitted for type approval. When approved under notification, these materials shall be retained by the applicant and not submitted unless otherwise requested by the FCC. For the purpose of the equipment authorization, these diagrams and instructions shall be considered as part of the monitor.

(11) When an RF signal of an amplitude within a range specified by the manufacturer is applied to the reference RF input terminal of the monitor, and another RF signal of the same frequency and of equal or lower amplitude is applied to any other selected RF input terminal, indications shall be provided meeting the following specifications.

(i) The accuracy with which any difference in the phases of the applied signals is indicated shall be ±1°,or better, for signal amplitude ratios of from 2:1 to 1:1, and ±2°,or better, for signal amplitude ratios in excess of 2:1 and up to 5:1.

(ii) The repeatability of indication of any difference in the phases of the applied signals shall be ±1°, or better.

(iii) The accuracy with which the relative amplitudes of the applied signals is indicated, over a range in which the ratio of these amplitudes is between 2:1 and 1:1, shall be ±2 percent of the amplitude ratio, or better, and for amplitude ratios in excess of 2:1 and up to 5:1, ±5 percent of the ratio, or better.

(iv) The repeatability of indication of the relative amplitudes of the applied signals, over a range where the ratio of these amplitudes is between 5:1 and 1:1, shall be ±2 percent of the amplitude ratio, or better.

(v) The modulation of the RF signals by a sinusoidal wave of any frequency between 100 and 10,000 Hz, at any amplitude up to 90 percent shall cause no deviation in an indicated phase difference from its value, as determined without modulation, greater than ±0.5°.

(12) The performance specifications set forth in paragraph (c)(13) of this section, shall be met when the monitor is operated and tested under the following conditions.

(i) After continuous operation for 1 hour, the monitor shall be calibrated and adjusted in accordance with the manufacturer's instructions.

(ii) The monitor shall be subjected to variations in ambient temperature between the limits of 10 and 40°C; external meters furnished by the manufacturer will be subjected to variations between 15 and 30°C.

(iii) Powerline supply voltage shall be varied over a range of from 10 percent below to 10 percent above the rated supply voltage.

(iv) The amplitude of the reference signal shall be varied over the operating range specified by the manufacturer, and in any case over a range of maximum to minimum values of 3 to 1.

(v) The amplitude of the comparison signal shall be varied from a value which is 0.2 of the amplitude of the reference signal to a value which is equal in amplitude to the reference signal.

(vi) Accuracy shall be determined for the most adverse combination of conditions set forth above.

(vii) Repeatability shall be determined as that which may be achieved under the specified test conditions over a period of 7 days, during which no calibration or adjustment of the instrument, subsequent to the initial calibration, shall be made.

(viii) The effects of modulation of the RF signal shall be separately determined, and shall not be included in establishing values for accuracy and repeatability.

(c) A station determined to have a critical directional antenna must use an antenna monitor having high tolerance characteristics determined on an individual basis, and specified on the station authorization. Such monitors are not subject to the authorization of paragraph (a), however they may be used only at the station for which they were specified.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[38 FR 1917, Jan. 19, 1973, as amended at 49 FR 3999, Feb. 1, 1984; 49 FR 29069, July 18, 1984; 50 FR 32416, Aug. 12, 1985; 50 FR 47054, Nov. 14, 1985; 51 FR 2707, Jan. 21, 1986]

§ 73.54 Antenna resistance and reactance measurements.

(a) The resistance of an omnidirectional series fed antenna is measured at either the base of the antenna without intervening coupling or tuning networks, or at the point the transmission line connects to the output terminals of the transmitter. The resistance of a shunt excited antenna may be measured at the point the radio frequency energy is transferred to the feed wire circuit or at the output terminals of the transmitter.

(b) The resistance and reactance of a directional antenna shall be measured at the point of common radiofrequency input to the directional antenna system. The following conditions shall obtain:

(1) The antenna shall be finally adjusted for the required radiation pattern.

(2) The reactance at the operating frequency and at the point of measurement shall be adjusted to zero, or as near thereto as practicable.

(c)(1) The resistance of an antenna shall be determined by the following procedure: A series of discrete measurements shall be made over a band of frequencies extending from approximately 25 kHz below the operating frequency to approximately 25 kHz above that frequency, at intervals of approximately 5 kHz. The measured values shall be plotted on a linear graph, with frequency as the abscissa and resistance as the ordinate. A smooth curve shall be drawn through the plotted values. The resistance value corresponding to the point of intersection of the curve and the ordinate representing the operating frequency of the station shall be the resistance of the antenna.

(2) For a directional antenna, the reactance of the antenna shall be determined by a procedure similar to that described in paragraph (c)(1) of this section.

(d) Notification must be filed with the FCC in Washington, DC when determining power by the direct method pursuant to § 73.51 and must specify the antenna or common point resistance at the operating frequency. The following information must also be kept on file at the station:

(1) A full description of the method used to make measurements.

(2) A schematic diagram showing clearly all components of coupling circuits, the point of resistance measurement, the location of the antenna ammeter, connections to and characteristics of all tower lighting isolation circuits, static drains, and any other fixtures connected to and supported by the antenna, including other antennas and associated networks. Any network or circuit component used to dissipate radio frequency power shall be specifically identified, and the impedances of all components which control the level of power dissipation, and the effective input resistance of the network must be indicated.

(e) AM stations using direct reading power meters in accordance with § 73.51, can either submit the information required by paragraph (d) of this section or submit a statement indicating that such a meter is being used. Subsequent station licenses will indicate the use of a direct reading power meter in lieu of the antenna resistance value in such a situation.

[34 FR 18305, Nov. 15, 1969, as amended at 37 FR 7517, Apr. 15, 1972; 45 FR 26062, Apr. 17, 1980; 49 FR 49850, Dec. 24, 1984; 50 FR 32416, Aug. 12, 1985; 51 FR 2707, Jan. 21, 1986; 51 FR 26250, July 22, 1986]

§ 73.57 Remote reading antenna and common point ammeters.

Remote reading antenna and common point ammeters may be used without further authority according to the following conditions:

(a) Remote reading antenna or common point ammeters may be provided by:

(1) Inserting second radio frequency current sensing device directly in the antenna circuit with remote leads to the indicating instruments.

(2) Inductive coupling to radio frequency current sensing device for pro-

viding direct current to indicating instrument.

(3) Capacity coupling to radio frequency current sensing device for providing direct current to indicating instrument.

(4) Current transformer connected to radio frequency current sensing device for providing direct current to indicating instrument.

(5) Using transmission line current meter at transmitter as remote reading ammeter. See paragraph (c) of this section.

(6) Using the indications of the antenna (phase) monitor, provided that when the monitor is used to obtain remote reading indication of non-directional antenna base current, the monitor calibration can be independently made and maintained for each mode of operation.

(b) Devices used for obtaining remote reading antenna or common point current indications, except antenna monitor coupling elements, shall be located at the same point as, but below (transmitter side) the associated main ammeter.

(c) In the case of shunt-excited antennas, the transmission line current meter at the transmitter may be considered as the remote antenna ammeter provided the transmission line is terminated directly into the excitation circuit feed line, which shall employ series tuning only (no shunt circuits of any type shall be employed) and insofar as practicable, the type and scale of the transmission line meter should be the same as those of the excitation circuit feed line meter (meter in slant wire feed line or equivalent).

(d) Calibration of remote reading ammeters must be made against their corresponding regular ammeters for each mode of operation as often as necessary to ensure their accuracy and:

(1) In no event shall a remote reading ammeter be calibrated against another remote reading, extension, or remote control meter.

(2) Each remote reading ammeter shall be accurate within 2 percent of the value read on its corresponding regular ammeter.

(e) All remote reading ammeters shall conform with the specifications for regular antenna ammeters.

(f) Meters with arbitrary scale divisions may be used provided that calibration charts or curves are provided at the transmitter control point showing the relationship between the arbitrary scales and the reading of the main meters.

(g) If a malfunction affects the remote reading indicators of the antenna or common point ammeter, the operating power may be determined by a method using alternative procedures as described in § 73.51.

[41 FR 36817, Sept. 1, 1976, as amended at 48 FR 38477, Aug. 24, 1983; 49 FR 49850, Dec. 24, 1984; 50 FR 32416, Aug. 12, 1985]

§ 73.58 Indicating instruments.

(a) Each AM broadcast station must be equipped with indicating instruments which conform with the specifications described in § 73.1215 for determining power by the direct and indirect methods, and with such other instruments as are necessary for the proper adjustment, operation, and maintenance of the transmitting system. However, auxiliary transmitters with a nominal power rating of 100 watts or less are not required to be equipped with instruments to determine power by the indirect method provided that the licensee can determine the antenna input power at all times.

(b) A thermocouple type ammeter or other device capable of providing an indication of radio frequency current, meeting the requirements of § 73.1215, shall be installed at the base of each antenna element. A suitable jack and plug arrangement may be used to permit removal of the meter from the antenna circuit thereby protecting it from damage by lighting.

(c) Since it is usually impractical to measure the actual antenna current of a shunt excited antenna system, the current measured at the input of the excitation circuit feed line is accepted as the antenna current.

(d) The function of each instrument shall be clearly and permanently shown on the instrument itself or on the panel immediately adjacent thereto.

(e) In the event that any one of these indicating instruments becomes defective when no substitute which conforms with the required specifications is available, the station may be operated without the defective instrument pending its repair or replacement for a period not in excess of 60 days without further authority of the Commission: *Provided*, That:

(1) If the defective instrument is an antenna base current ammeter of a directional antenna system, the indications may be obtained from the antenna monitor pending the return to service of the regular meter, provided other parameters are maintained at their normal values.

(2) If the defective instrument is the antenna current meter of a non-directional station which does not employ a remote antenna ammeter, or if the defective instrument is the common point meter of a station which employs a directional antenna and does not employ a remote common point meter, the operating power shall be determined by a method described in § 73.51(a)(1) or (d) during the entire time the station is operated without the antenna current meter or common point meter. However, if a remote meter is employed and the antenna current ammeter or common point meter becomes defective, the remote meter can be used to determine operating power pending the return to service of the regular meter.

(f) If conditions beyond the control of the licensee prevent the restoration of the meter to service within the above allowed period, information requested in accordance with § 73.3549 may be filed with the Engineer in Charge of the radio district in which the station is located for such additional time as may be required to complete repairs of the defective instrument.

[41 FR 36817, Sept. 1, 1976, as amended at 48 FR 38477, Aug. 24, 1983; 49 FR 49850, Dec. 24, 1984; 50 FR 32416, Aug. 12, 1985; 51 FR 2707, Jan. 21, 1986; 53 FR 2498, Jan. 28, 1988]

§ 73.61 AM directional antenna field strength measurements.

(a) Each AM station using a directional antenna must make field strength measurements at the monitoring point locations specified in the instrument of authorization, as often as necessary to ensure that the field at those points does not exceed the values specified in the station authorization. Additionally, stations not having an approved sampling system must make the measurements once each calendar quarter at intervals not exceeding 120 days. The provision of this paragraph supersedes any schedule specified on a station license issued prior to January 1, 1986. The results of the measurements are to be entered into the station log pursuant to the provisions of § 73.1820.

(b) Partial proof of performance measurements using the procedures described in § 73.154 must be made whenever the licensee has reason to believe that the radiated field may be exceeding the limits for which the station was most recently authorized to operate.

(c) A station may be directed to make a partial proof of performance by the FCC whenever there is an indication that the antenna is not operating as authorized.

[50 FR 47054, Nov. 14, 1985]

§ 73.62 Directional antenna system tolerances.

(a) Each AM station operating a directional antenna must maintain the indicated relative amplitudes of the antenna base currents and antenna monitor currents within 5% of the values specified therein. Directional antenna relativephase currents must be maintained to within ±3° of the values specified on the instrument of authorization, unless other tolerances are specified therein.

(b) When periods of inclement weather or severe climatic conditions make it impossible to maintain the operating parameters within the tolerances specified in paragraph (a) of this section, a licensee may operate with parameters at variance from such tolerances for a period up to 10 consecutive days, providing the monitoring point values specified in the station authorization are maintained within authorized limits. If, at the end of this 10 day period, normal operation is not restored, the licensee must request from the FCC in Washington, DC, special temporary authority (STA) to continue operation of the station at variance from the provisions of this section. Any request for such authority shall be made in accordance with § 73.1635 Special Temporary Authorizations (STA), except that the prior notice requirement of § 73.1635(a)(1) is waived. Instead, such a request shall be made immediately at the end of the 10 day period of operation allowed by this paragraph.

(c) All other requests for authority to operate with parameters at variance not necessitated by inclement weather or severe climatic conditions must be made in accordance with § 73.1635.

[50 FR 30946, July 31, 1985]

§ 73.68 Sampling systems for antenna monitors.

(a) Each AM station permittee authorized to construct a new directional antenna system, must install the sampling system in accordance with the following specifications:

(1) Devices used to extract or sample the current and the transmission line connecting the sampling elements to the antenna monitor must provide accurate and stable signals to the monitor (e.g., rigidly mounted and non-rotatable loops and all system components protected from physical and environmental disturbances).

(2) Sampling lines for critical directional antennas (see § 73.14) must be of uniform length. Sampling lines for non-critical directional antennas may be of different lengths provided the phase difference of signals at the monitor are less than 0.5° between the shortest and longest cable lengths due to temperature variations to which the system is exposed.

(3) Other configurations of sampling systems may be used upon demonstration of stable operation to the FCC.

(b) A station having an antenna sampling system constructed according to the specifications given in paragraph (a) of this section, may obtain approval of that system by submitting an informal request to the FCC in Washington, DC. The request for approval, signed by the licensee or authorized representative, must contain sufficient information to show that the sampling system is in compliance with all requirements of paragraph (a) of this section.

NOTE: A public notice giving additional information on approval of antenna sampling systems is available upon request from the FCC's current copy contractor.

(c) In the event that the antenna monitor sampling system is temporarily out of service for repair or replacement, the station may be operated, pending completion of repairs or replacement, for a period not exceeding 120 days without further authority from the FCC if all other operating parameters and the field monitoring point values are within the limits specified on the station authorization.

(d) If the antenna sampling system is modified or components of the sampling system are replaced, the following procedure shall be followed:

(1) Temporary authority shall be requested and obtained from the Commission in Washington to operate with parameters at variance with licensed values pending issuance of a modified license specifying parameters subsequent to modification or replacement of components.

(2) Immediately prior to modification or replacement of components of the sampling system not on the towers, and after a verification that all monitoring point values, base current ratios and operating parameters are within the limits or tolerances specified in the instrument of authorization or the pertinent rules, the following indications must be read for each radiation pattern: Final plate current and plate voltage, common point current, base currents and their ratios, antenna monitor phase and current indications, and the field strength at each monitoring point. Subsequent to these modifications or changes the above procedure must be repeated.

(3) If that portion of the sampling system above the base of the towers is modified or components replaced, a partial proof of performance shall be executed subsequent to these changes

consisting of at least 10 field strength measurements on each of the radials established in the latest complete proof of performance of the antenna system. These measurements shall be made at locations, all within 3 to 16 kilometers (2 to 10 miles) from the antenna, which were utilized in such proof, including, on each radial, the location, if any, designated as a monitoring point in the station authorization. Measurements shall be analyzed in the manner prescribed in § 73.186. The partial proof of performance shall be accompanied by common point impedance measurements made in accordance with § 73.54.

(4) Request for modification of license shall be submitted to the FCC in Washington, DC, within 30 days of the date of sampling system modification or replacement. Such request shall specify the transmitter plate voltage and plate current, common point current, base currents and their ratios, antenna monitor phase and current indications, and all other data obtained pursuant to this paragraph.

(e) If an existing sampling system is found to be patently of marginal construction, or where the performance of a directional antenna is found to be unsatisfactory, and this deficiency reasonably may be attributed, in whole or in part, to inadequacies in the antenna monitoring system, the FCC may require the reconstruction of the sampling system in accordance with requirements specified above.

[41 FR 7405, Feb. 18, 1976, as amended at 42 FR 24056, May 12, 1977; 44 FR 58731, Oct. 11, 1979; 46 FR 35462, July 8, 1981; 48 FR 38478, Aug. 24, 1983; 48 FR 44805, Sept. 30, 1983; 49 FR 32358, Aug. 14, 1984; 50 FR 47054, Nov. 14, 1985; 51 FR 9965, Mar. 24, 1986; 51 FR 40435, Nov. 7, 1986]

§ 73.69 Antenna monitors.

(a) Each station using a directional antenna must have in operation at the transmitter site an FCC authorized antenna monitor. However, if the station authorization sets specific tolerances within which the phase and amplitude relationships must be maintained, or requires the use of a monitor of specified repeatability, resolution or accuracy, the antenna monitor used will be authorized on an individual basis.

(1) Normally, the antenna monitor is to be installed immediately adjacent to the transmitter and antenna phasing equipment. When the phasing equipment is located within the antenna field at a distance from the transmitter, the monitor may be located with the phasing equipment in suitable housing such that the temperature variation is maintained at all times within those limits under which the monitor was type approved. Additionally, remote switching and metering must be installed so that all required monitor indications can be observed at the position(s) where the duty operator is located.

(2) The antenna monitor installed at a station operating a directional antenna by remote control, using extension meters to read and log the monitor indications or when the monitor is installed in the antenna field at a distance from the transmitter, must be designed and authorized for such use in accordance with the provisions of § 73.53(b)(9).

(b) In the event that the antenna monitor sampling system is temporarily out of service for repair or replacement, the station may be operated pending completion of repairs or replacement, for a period not exceeding 120 days without further authority from the FCC if all other operating parameters, and the field monitoring point values are within the limits specified on the station authorization.

(c) If conditions beyond the control of the licensee prevent the restoration of the monitor to service within the allowed period, informal request in accordance with § 73.3549 of the Commission's rules must be filed with the Engineer in Charge of the radio district in which the station is located for such additional time as may be required to complete repairs of the defective instrument.

(d) If an authorized antenna monitor is replaced by another antenna monitor, the following procedure shall be followed:

(1) Temporary authority shall be requested and obtained from the Commission in Washington to operate with parameters at variance with licensed

values, pending issuance of a modified license specifying new parameters.

(2) Immediately prior to the replacement of the antenna monitor, after a verification that all monitoring point values and base current ratios are within the limits or tolerances specified in the instrument of authorization or the pertinent rules, the following indications must be read for each radiation pattern: Final plate current and plate voltage, common point current, base currents, antenna monitor phase and current indications, and the field strength at each monitoring point.

(3) With the new monitor substituted for the old, all indications specified in paragraph (d)(2) of this section, again must be read. If no change has occurred in the indication for any parameter other than the indications of the antenna monitor, the new antenna monitor indications must be deemed to be those reflecting correct array adjustments.

(4) If it cannot be established by the observations required in paragraph (d)(2) of this section that base current ratios and monitoring point values are within the tolerances or limits prescribed by the rules and the instrument of authorization, or if the substitution of the new antenna monitor for the old results in changes in these parameters, a partial proof of performance shall be executed, as described in § 73.154 and measurements shall be analyzed in the manner required in § 73.186.

(5) An informal request for modification of license shall be submitted to the Commission in Washington, DC, within 30 days of the date of monitor replacement. Such request shall specify the make, type, and serial number of the replacement monitor, phase and sample current indications, and other data obtained pursuant to this paragraph (d) of this section.

(e) The antenna monitor must be calibrated according to the manufacturer's instructions as often as necessary to ensure its proper operation.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, as amended, 1082, as amended; 47 U.S.C. 154, 303. Interpret or apply secs. 301, 303, 307, 48 Stat. 1081, 1082, as amended, 1083, as amended, 47 U.S.C. 301, 303, 307)

[38 FR 1918, Jan. 19, 1973, as amended at 40 FR 15884, Apr. 8, 1975; 40 FR 25459, June 16, 1975; 40 FR 27939, July 2, 1975; 41 FR 22942, June 8, 1976; 41 FR 32892, Aug. 6, 1976; 43 FR 4022, Jan. 31, 1978; 45 FR 26062, Apr. 17, 1980; 48 FR 38478, Aug. 24, 1983; 49 FR 3999, Feb. 1, 1984; 50 FR 47054, Nov. 14, 1985; 51 FR 9965, Mar. 24, 1986]

§ 73.72 Operating during the experimental period.

(a) An AM station may operate during the experimental period on its assigned frequency and with its authorized power for the routine testing and maintenance of its transmitting system, and for conducting experimentation under an experimental authorization; provided no interference is caused to other stations maintaining a regular operating schedule within such period.

(b) No station licensed for "daytime" or "specified hours" of operation may broadcast any regular or scheduled program during this period.

(c) The licensee of an AM station shall operate or refrain from operating its station during the experimental period as directed by the FCC to facilitate frequency measurements or for the determination of interference.

[43 FR 32780, July 28, 1978]

§ 73.88 Blanketing interference.

The licensee of each broadcast station is required to satisfy all reasonable complaints of blanketing interference within the 1 V/m contour.

[28 FR 13574, Dec. 14, 1963]

§ 73.99 Presunrise service authorization (PSRA) and Postsunset service authorization (PSSA).

(a) To provide the maximum uniformity in early morning operation compatible with interference considerations, and to provide for additional service during early evening hours for daytime-only stations, provisions are made for presunrise service and postsunset service. The permissible power to be assigned to presunrise or postsunset service authorization will not exceed 500 watts, or the authorized daytime or critical hours power (whichever is less).

(b) Presunrise service authorization (PSRA) will permit:

(1) Class II stations operating on Mexican, Bahamian, and Canadian Class I-A and I-B Clear Channels to commence PSRA operation at 6:00 a.m. local time and to continue such operation until the sunrise times specified in their basic instrument of authorization.

(2) Class II stations situated outside the respective 0.5 mV/m 50% skywave contours of co-channel domestic Class I-A and I-B stations to commence PSRA operation 6:00 a.m. local time, and continue this operation until sunrise times specified in their basic instruments of authorization.

(3) Class II stations located inside a co-channel 0.5 mV/m 50% skywave contours of domestic Class I-A and I-B stations, to commence PSRA operation either at 6:00 a.m. local time, or at the time of sunrise at the nearest Class I station located east of the Class II station (whichever is later), and continue this operation until the sunrise times specified in their basic instruments of authorization.

(4) Class III stations to commence PSRA operation at 6.00 a.m. local time and to continue such operation until local sunrise times specified in their basic instruments of authorization.

(c) Extended Daylight Saving Time Pre-Sunrise Authorizations:

(1) Between the first Sunday in April and the end of the month of April, Class II and Class III daytime-only AM stations will be permitted to conduct pre-sunrise operation beginning at 6:00 a.m. local time with a maximum power of 500 watts (not in excess of the station's regular daytime or critical hours power), reduced as necessary to comply with the following requirements:

(i) Full protection is to be provided as specified in applicable international agreements.

(ii) Domestic protection is to be provided to the 0.5 mV/m groundwave signals of co-channel Class I-A and Class I-B stations, but protection to the 0.5 mV/m 50% skywave of these stations is not required.

(iii) In determining the protection to be provided, the effect of each interfering signal will be evaluated separately. The presence of interference from other stations will not reduce or eliminate the required protection.

(iv) Notwithstanding the requirements of paragraph (c)(1) (ii) and (iii) of this section, the stations will be permitted to operate with a minimum power of 10 watts unless a lower power is required by international agreement.

(2) The Commission will issue appropriate authorizations to Class II or Class III daytime-only stations not previously eligible to operate during this period. Class II or Class III daytime-only station already authorized to operate during this pre-sunrise period may continue to operate under their current authorization.

(d) Postsunset service authorization (PSSA) will permit:

(1) Class II-D stations located on Mexican, Bahamian, and Canadian Class I-A and I-B Clear Channels to commence PSSA operation at sunset times specified in their basic instruments of authorization and to continue for two hours after such specified times. In addition, Class II-S stations may operate pursuant to their Post-Sunset authority in lieu of their licensed nighttime power.

(2) Class II-D stations situated outside the respective 0.5 mV/m 50% skywave contours of co-channel domestic Class I-A and I-B stations to commence PSSA operations at sunset times specified in their basic instruments of authorization and to continue up to two hours after such specified times.

(3) Class II-D stations located inside co-channel 0.5 mV/m 50% skywave contours of domestic Class I-A and I-B stations to commence PSSA operation at sunset times specified in their basic instruments of authorization and to continue such operation until two hours past such specified times, or until the time of sunset at the nearest Class I station located west of the Class II station (whichever is earlier). (Those west of the dominant station do not qualify for PSSA operation.)

(4) Class III daytime only stations to commence PSSA operation at sunset times specified on their basic instruments of authorization and to contin-

ue such operation until two hours past such specified times.

(e) *Procedural Matters.* (1) Applications for PSRA and PSSA operation are not required. Instead, the FCC will calculate the periods of such operation and the power to be used pursuant to the provisions of this Section and the protection requirements contained in applicable international agreements. Licensees will be duly notified of permissable power and times of operation. Presunrise and Postsunset service authority permits operation on a secondary basis and does not confer license rights. No request for such authority need be filed. However, stations intending to operate PSRA or PSSA shall submit by letter, signed as specified in § 73.3513, the following information:

(i) Licensee name, station call letters and station location,

(ii) Indication as to whether PSRA operation, PSSA operation, or both, is intended by the station,

(iii) A description of the method whereby any necessary power reduction will be achieved.

(2) Upon submission of the required information, such operation may begin without further authority.

(f) *Technical Criteria.* Calculations to determine whether there is objectionable interference will be determined in accordance with the AM Broadcast Technical Standards, §§ 73.182 through 73.190, and applicable international agreements. Calculations will be performed using daytime antenna systems, or critical hours antenna systems when specified on the license. In performing calculations to determine assigned power and times for commencement of PSRA and PSSA operation, the following standards and criteria will be used:

(1) Class II stations operating in accordance with paragraphs (b)(1), (b)(2), (d)(1) and (d)(2) of this section are required to protect the nighttime 0.5 mV/m 50% skywave contours of co-channel Class I stations. Where a 0.5 mV/m 50% skywave signal is not produced, the 0.5 mV/m groundwave contour will be protected.

(2) Class II stations are required to fully protect foreign Class II stations when operating PSRA and PSSA and Class II-D station operating PSSA are required to fully protect domestic full time Class II stations. For purposes of determining protection, the existing nighttime RSS limit will be used in the determination of maximum power permissible.

(3) Class II stations operating in accordance with paragraphs (c)(2) and (c)(3) of this section are required to restrict maximum 10% skywave radiation to any point on the daytime 0.1 mV/m groundwave contour of the co-channel Class I station to 25 uV/m. For purposes of performing these calculations of 0.1 mV/m contour of the Class I station will be determined by use of Figure M3, Estimated Ground Conductivity in the United States. When the 0.1 mV/m contour extends beyond the national boundary the international boundary shall be considered the 0.1 mV/m contour.

(4) Class III stations operating PSRA and PSSA are required to provide full protection to co-channel foreign Class III stations.

(5) Class III daytime-only stations operating PSSA beyond 6:00 p.m. local time are required to fully protect domestic full-time Class III stations.

(6) The protection that Class III daytime-only stations are required to provide when operating PSSA until 6:00 p.m. local time is as follows:

(i) For the first half-hour of PSSA operation, protection will be calculated at sunset plus 30 minutes at the site of the Class III daytime-only station;

(ii) For the second half-hour of PSSA operation, protection will be calculated at sunset plus one hour at the site of the Class III daytime-only station;

(iii) For the second hour of PSSA operation, protection will be calculated at sunset plus two hours at the site of the Class III daytime-only station;

(iv) Minimum powers during the period until 6:00 p.m. local time shall be permitted as follows:

Calculated power	Adjusted minimum power
From 1 to 45 watts	50 watts.
Above 45 to 70 watts	75 watts.
Above 70 to 100 watts	100 watts.

(7) For the purposes of determining protection, the existing nighttime RSS limit will be used in the determination of maximum power permissible.

(g) Calculations made under paragraph (d) of this section may not take outstanding PSRA or PSSA operations into account, nor will the grant of a PSRA or PSSA confer any degree of interference protection on the holder thereof.

(h) Operation under a PSRA or PSSA is not mandatory, and will not be included in determining compliance with the requirements of § 73.1740. To the extent actually undertaken, however, presunrise operation will be considered by the FCC in determining overall compliance with past programming representations and station policy concerning commercial matter.

(i) The PSRA or PSSA is secondary to the basic instrument of authorization with which it is to be associated. The PSRA or PSSA may be suspended, modified, or withdrawn by the FCC without prior notice or right to hearing, if necessary to resolve interference conflicts, to implement agreements with foreign governments, or in other circumstances warranting such action. Moreover, the PSRA or PSSA does not extend beyond the term of the basic authorization.

(j) The Commission will periodically recalculate maximum permissible power and times for commencing PSRA and PSSA for each Class II and Class III station. For each Class II or III daytime only station operating in accordance with paragraph (c) of this section, the Commission will calculate the maximum power at which each individual station may conduct presunrise operations during extended daylight saving time and shall issue conforming authorizations. These original notifications and subsequent notifications should be associated with the station authorization. Upon notification of new power and time of commencing operation, affected stations will make necessary adjustments within 30 days.

(k) A PSRA and PSSA does not require compliance with §§ 73.45, 73.182, 73.188, and 73.1560 where the operation might otherwise be considered as technically substandard. Further, the requirements of paragraphs (a)((b)(2), (c)(2), and (d)(2) of § 73.12 concerning the scale ranges of tra mission system indicating instrumen are waived for PSRA and PSSA op ation except for the radio frequen ammeters used in determining ante na input power.

(l) A station having an antenna mo itor incapable of functioning at the thorized PSRA and PSSA power wh using a directional antenna shall ta the monitor reading using unmodul ed carrier at the authorized daytin power immediately prior to commen ing PSRA or PSSA operations. Spec conditions as the FCC may deem propriate may be included for PSR or PSSA to insure operation of t transmitter and associate equipme in accordance with all phases of go engineering practice.

NOTE.—Extended hours of operations subject to international agreements gover ing all operations. These agreements are the process of revision, but until this pr ess is completed it will not be possible allow full operation as outlined above.

(m) The authorization of unlimite time operation by daytime-only st tions that are reclassifeid as Class II- or Class III-S stations will not affe their right to operate during pr scribed presunrise and postsuns hours in accordance with PSRA's an PSSA's issued pursuant to this sectio

[48 FR 42957, Sept. 20, 1983, as amended 49 FR 48048, Dec. 10, 1984; 50 FR 139 Apr. 9 1985; 50 FR 24521, June 11, 1985; FR 48270, Dec. 21, 1987; 52 FR 49162, De 30, 1987; 53 FR 24942, July 1, 1988]

§ 73.127 Use of multiplex transmission.

The licensee of an AM broadcast st tion may use its AM carrier to tran mit signals not audible on ordinar consumer receivers, for both broadca and non-broadcast purposes subject t the following requirements:

(a) Such use does not disrupt or de grade the station's own programs o the programs of other broadcast st tions.

(b) AM carrier services that ar common carrier in nature are subjec to common carrier regulation. Licens ees operating such services are re quired to apply to the FCC for the ap propriate authorization and to compl with all policies and rules applicable to the service. Responsibility for making the initial determinations of whether a particular activity is common carriage rests with the AM station licensee. Initial determinations by licensees are subject to FCC examination and may be reviewed at the FCC's discretion. AM carrier services that are private carrier in nature must notify the Licensing Division of the Private Radio Bureau at Gettysburg, Pennsylvania 17325, by letter, prior to initiating service certifying compliance with 47 CFR Parts 90 and 94.

(c) AM carrier services are of a secondary nature under the authority of the AM station authorization, and the authority to provide such communications services may not be retained or transferred in any manner separate from the station's authorization. The grant or renewal of an AM station permit or license is not furthered or promoted by proposed or past service. The permittee or licensee must establish that the broadcast operation is in the public interest wholly apart from the subsidiary communications services provided.

(d) The station identification, delayed recording, and sponsor identification announcements required by §§ 73.1201, 73.1208, and 73.1212 are not applicable to leased communications services transmitted via services that are not of a general broadcast program nature.

(e) The licensee or permittee must retain control over all material transmitted in a broadcast mode via the station's facilities, with the right to reject any material that it deems inappropriate or undesirable.

(f) Installation of the multiplex transmitting equipment must conform with the requirements of § 73.1690(e).

[47 FR 25345, June 11, 1982, as amended at 49 FR 34015, Aug. 28, 1984; 51 FR 41629, Nov. 18, 1986; 51 FR 44478, Dec. 10, 1986]

§ 73.128 AM stereophonic broadcasting.

(a) An AM broadcast station may, without specific authority from the FCC, transmit stereophonic programs upon installation of type accepted stereophonic transmitting equipment and the necessary measuring equipment to determine that the stereophonic transmissions conform to the modulation characteristics specified for the stereophonic transmission system in use.

(b) The FCC does not specify the composition of the transmitted stereophonic signal. However, the following limitations on the transmitted wave must be met to insure compliance with the occupied bandwidth limitations, compatibility with AM receivers using envelope detectors, and any applicable international agreements to which the United States is a party:

(1) The transmitted wave must meet the occupied bandwidth specifications of § 73.44 under all possible conditions of program modulation. Compliance with requirement shall be demonstrated either by the following specific modulation tests or other documented test procedures that are to be fully described in the application for type acceptance and the transmitting equipment instruction manual. (See § 2.983 (d)(8) and (j)).

(i) Main channel (L+R) under all conditions of amplitude modulations for the stereophonic system but not exceeding amplitude modulation on negative peaks of 100%.

(ii) Stereophonic subchannel (L−R) modulated with audio tones of the same amplitude at the transmitter input terminals as in paragraph (b)(i) of this section but with the phase of either the L or R channel reversed.

(iii) Left and Right Channel only, under all conditions of modulation for the stereophonic system in use but not exceeding amplitude modulation on negative peaks of 100%.

[47 FR 13165, Mar. 29, 1982, as amended at 51 FR 2707, Jan. 21, 1986]

§ 73.132 Territorial exclusivity.

No licensee of an AM broadcast station shall have any arrangement with a network organization which prevents or hinders another station serving substantially the same area from broadcasting the network's programs not taken by the former station, or which prevents or hinders another station serving a substantially different area from broadcasting any program of the network organization: *Provided, however,* That this section does not prohibit arrangements under which the station is granted first call within its primary service area upon the network's programs. The term "network organization" means any organization originating program material, with or without commercial messages, and furnishing the same to stations interconnected so as to permit simultaneous broadcast by all or some of them. However, arrangements involving only stations under common ownership, or only the rebroadcast by one station or programming from another with no compensation other than a lump-sum payment by the station rebroadcasting, are not considered arrangements with a network organization. The term "arrangement" means any contract, arrangement or understanding, expressed or implied.

[42 FR 16422, Mar. 28, 1977]

§ 73.150 Directional antenna systems.

(a) For each station employing a directional antenna, all determinations of service provided and interference caused shall be based on the inverse fields of the standard radiation pattern for that station. (As applied to nighttime operation the term "standard radiation pattern" shall include the radiation pattern in the horizontal plane, and radiation patterns at angles above this plane, as required by par graph (b)(1) of this section.) In th event of a discrepancy between th calculated and plotted values of standard pattern, the calculat values will prevail with respect to pr tection of domestic stations while th plotted (notified) values will preva with respect to protection of forei stations.

(1) Parties submitting directional a tenna patterns pursuant to this se tion and § 73.152 (Modified standa pattern) must submit patterns whic are tabulated and plotted in units millivolts per meter at 1 kilometer.

NOTE: Applications for new stations a for changes (both minor and major) in e isting stations must use a standard patte

(b) The following data shall be su mitted with an application for autho ity to install a directional antenna:

(1) The standard radiation patte for the proposed antenna in the ho zontal plane, and where pertinent, a muthal radiation patterns for angl of elevation up to and including 6 with a separate pattern for each incr ment of 5°.

(i) The standard radiation patte shall be based on the theoretical ra ation pattern. The theoretical ra ation pattern shall be calculated in a cordance with the following math matical expression:

$$E(\phi,\theta)_{th} = \left| k \sum_{i=1}^{n} F_i f_i(\theta) \underline{/ S_i \cos\theta \cos(\phi_i - \phi) + \psi_i} \right|$$

(Eq. 1)

where:

$E(\phi,\theta)_{th}$ Represents the theoretical inverse distance fields at one mile for the given azimuth and elevation.
k Represents the multiplying constant which determines the basic pattern size. It shall be chosen so tha the effective field (RMS) of the theoretical pattern in the horizontal plane shall be no greater than the value computed on the assumption that nominal station power (see § 73.14) is delivered to the directional array, and that a lumped loss resistance of one ohm exists at the current loop of each element of the arra or at the base of each element of electrical height lower than 0.25 wavelength, and no less than the value required by § 73.189(b)(2) of this part for a station of the class and nominal power for which the pattern i designed.
n Represents the number of elements (towers) in the directional array.
i Represents the i^{th} element in the array.
F_i Represents the field ratio of the i^{th} element in the array.
θ Represents the vertical elevation angle measured from the horizontal plane.
$f_i(\theta)$ represents the vertical plane radiation characteristic of the i^{th} antenna. This value depends on the tower height, as well as whether the tower is top-loaded or sectionalized. The various formulas for computing $f_i(\theta)$ are given in § 73.160.
S_i Represents the electrical spacing of the i^{th} tower from the reference point.
ϕ_i Represents the orientation (with respect to true north) of the i^{th} tower.
ϕ Represents the azimuth (with respect to true north).
ψ_i Represents the electrical phase angle of the current in the i^{th} tower.

The standard radiation pattern shall be constructed in accordance with the following mathematical expression:

$$E(\phi,\theta)_{std} = 1.05\sqrt{[E(\phi,\theta)_{th}]^2 + Q^2}$$

(Eq. 2)

where:

$E(\phi,\theta)_{std}$ Represents the inverse fields at one mile which are deemed to be produced by the directional antenna in the horizontal and vertical planes.

$E(\phi,\theta)_{th}$ Represents the theoretical inverse distance fields at one mile as computed in accordance with Eq. 1, above.

The method of computing Q will be by using the metric system. For all situations prior to January 4, 1982, Q is the greater of the following quantities:

$$0.025\ g(\theta)\ E_{rss}$$

or

$$6.0\ g(\theta)\sqrt{P_{kW}}$$

For all situations on or after January 4, 1982, Q is the greater of the following quantities:

$$0.025\ g(\theta)\ E_{rss}$$

or

$$10.0\ g(\theta)\sqrt{P_{kW}}$$

where.

$g(\theta)$ is the vertical plane distribution factor, $f(\theta)$, for the shortest element in the array (see Eq. 2, above; also see § 73.190, Figure 5). If the shortest element has an electrical height in excess of 0.5 wavelength, $g(\theta)$ shall be computed as follows:

$$g(\theta) = \frac{\sqrt{|f(\theta)|^2 + 0.0625}}{1.030776}$$

E_{rss} is the root sum square of the amplitudes of the inverse fields of the elements of the array in the horizontal plane, as used in the expression for $E(\phi,\theta)_{th}$ (see Eq. 1, above), and is computed as follows:

$$E_{rss} = k\sqrt{\sum_{i=1}^{n} F_i^{\,2}}$$

P_{kw} is the nominal station power expressed in kilowatts, see § 73.14. If the nominal power is less than one kilowatt, $P_{kw} = 1$.

(ii) Where the orthogonal addition of the factor Q to $E(\phi,\theta)_{th}$ results in a standard pattern whose minimum fields are lower than those found necessary or desirable, these fields may be increased by appropriate adjustment of the parameters of $E(\phi,\theta)_{th}$.

(2) All patterns shall be computed for integral multiples of five degrees, beginning with zero degrees representing true north, and, shall be plotted to the largest scale possible on unglazed letter-size paper (main engraving approximately 7″ x 10″) using only scale divisions and subdivisions of 1, 2, 2.5, or 5 times 10^{nth}. The horizontal plane pattern and other azimuthal patterns shall be plotted on polar coordinate paper, with the zero degree point corresponding to true north. Patterns for elevation angles above the horizontal plane may be plotted in polar or rectangular coordinates, with the pattern for each angle of elevation on a separate page. Rectangular plots shall begin and end at true north, with all azimuths labelled in increments of not less than 20 degrees. If a rectangular plot is used, the ordinate showing the scale for radiation may be logarithmic. Minor lobe and null detail occurring between successive patterns for specific angles of elevation need not be submitted. Values of field strength on any pattern less than ten percent of the maximum field strength plotted on that pattern shall be shown on an enlarged scale. Rectangular plots with a logarithmic ordinate need not utilize an expanded scale unless necessary to show clearly the minor lobe and null detail. The direction and distance toward each existing station with which interference may be involved shall be indicated on the horizontal plane pattern, and, as appropriate, on patterns for other angles of elevation with all directions referred to true north.

(3) The effective (RMS) field strength in the horizontal plane of $E(\theta,\theta)_{std}$, $E(\phi,\theta)_{th}$ and the root sum square (RSS) value of the inverse fields of the array elements at 1 mile, derived from the equation for $E(\phi,\theta)_{th}$. These values shall be tabulated on the page on which the horizontal plane pattern is plotted, which shall be specifically labeled as the Standard Horizontal Plane Pattern.

(4) Physical description of the array, showing:

(i) Number of elements.

(ii) Type of each element (i.e., guyed or self-supporting, uniform cross section or tapered (specifying base dimensions), grounded or insulated, etc.)

(iii) Details of top loading, or sectionalizing, if any.

(iv) Height of radiating portion of each element in feet (height above base insulator, or base, if grounded).

(v) Overall height of each element above ground.

(vi) Sketch of antenna site, indicating its dimensions, the location of the antenna elements, thereon, their spacing from each other, and their orientation with respect to each other and to true north, the number and length of the radials in the ground system about each element, the dimensions of ground screens, if any, and bonding between towers and between radial systems.

(5) Electrical description of the array, showing:

(i) Relative amplitudes of the fields of the array elements.

(ii) Relative time phasing of the fields of the array elements in degrees leading [+] or lagging [−].

(iii) Space phasing between elements in degrees.

(iv) All assumptions made and the basis therefor, particularly with respect to the electrical height of the elements, current distribution along elements, efficiency of each element, and ground conductivity.

(v) Formulas used for computing $E(\phi,\theta)_{th}$ and $E(\phi,\theta)$. Complete tabulation of final computed data used in plotting patterns, including data for the determination of the RMS value of the pattern, and the RSS field of the array.

(6) The values used in specifying the parameters which describe the array must be specified to no greater precision than can be achieved with available monitoring equipment. Use of greater precision raises a rebuttable presumption of instability of the array. Following are acceptable values of precision; greater precision may be used only upon showing that the monitoring equipment to be installed gives accurate readings with the specified precision.

(i) Field Ratio: 3 significant figures.

(ii) Phasing: to the nearest 0.1 degree.

(iii) Orientation (with respect to a common point in the array, or with respect to another tower): to the nearest 0.1 degree.

(iv) Spacing (with respect to a common point in the array, or with respect to another tower): to the nearest 0.1 degree.

(v) Electrical Height (for all parameters listed in Section 73.160): to the nearest 0.1 degree.

(vi) Theoretical RMS (to determine pattern size): 4 significant figures.

(vii) Additional requirements relating to modified standard patterns appear in § 73.152(b)(5).

(7) Any additional information required by the application form.

(c) Sample calculations for the theoretical and standard radiation follow. Assume a five kilowatt (nominal power) station with a theoretical RMS of 685 mV/m at one kilometer. Assume that it is an in-line array consisting of three towers. Assume the following parameters for the towers:

Tower	Field ratio	Relative phasing	Relative spacing	Relative orientation
1	1.0	−128.5	0.0	0.0
2	1.89	0.0	110.0	285.0
3	1.0	128.5	220.0	285.0

Assume that tower 1 is a typical tower with an electrical height of 120 degrees. Assume that tower 2 is top-loaded in accordance with the method described in § 73.160(b)(2) where A is 120 electrical degrees and B is 20 electrical degrees. Assume that tower 3 is sectionalized in accordance with the method described in § 73.160(b)(3) where A is 120 electrical degrees, B is 20 electrical degrees, C is 220 electrical degrees, and D is 15 electrical degrees.

The multiplying constant will be 323.6.

Following is a tabulation of part of the theoretical pattern:

Azimuth	0	30	60	Vertical angle
0	15.98	62.49	68.20	
105	1225.30	819.79	234.54	
235	0.43	18.46	34.56	
247	82.62	51.52	26.38	

If we further assume that the station has a standard pattern, we find that Q, for $\theta = 0$, is 22.36.

Following is a tabulation of part of the standard pattern:

Azimuth	0	30	60	Vertical angle
0	28.86	68.05	72.06	
105	1286.78	860.97	246.41	
235	23.48	26.50	37.18	

Azimuth	0	30	60	Vertical angle
247	89.87	57.03	28.87	

The RMS of the standard pattern in the horizontal plane is 719.63 mV/m at one kilometer.

[36 FR 919, Jan. 20, 1971, as amended at 37 FR 529, Jan. 13, 1972; 41 FR 24134, June 15, 1976; 46 FR 11991, Feb. 12, 1981; 48 FR 24384, June 1, 1983; 51 FR 2707, Jan. 21, 1986; 52 FR 36877, Oct. 1, 1987]

§ 73.151 Field strength measurements to establish performance of directional antennas.

(a) In addition to the information required by the license application form, the following showing must be submitted to establish for each mode of directional operation, that the effective measured field strength (RMS) at 1 mile is not less than 85 percent of the effective field strength specified for the standard radiation pattern for that mode of directional operation, or less than that specified in § 73.189(b) for the class of station involved, whichever is the higher value, and that the measured field strength at 1 mile in any direction does not exceed the field shown in that direction on the standard radiation pattern for that mode of directional operation:

(1) A tabulation of inverse field strengths in the horizontal plane at 1 mile, as determined from field strength measurements taken and analyzed in accordance with § 73.186, and a statement of the effective field strength (RMS), based on these measurements. Measurements shall be made in at least the following directions:

(i) Those specified in the instrument of authorization.

(ii) In major lobes. Generally at least three radials are necessary to establish a major lobe; however, additional radials may be required.

(iii) Along sufficient number of other radials to establish the effective field. In the case of a relatively simple directional antenna pattern, approximately five radials in addition to those in paragraphs (a)(1) (i) and (ii) of this section are sufficient. However, when more complicated patterns are involved, that is, patterns having seven or sharp lobes or nulls, measuremen shall be taken along as many radia as may be necessary, to definitely e tablish the pattern(s).

(2) A tabulation of:

(i) The phase difference of the cu rent in each other element with re spect to the reference element, and whether the current leads (+) or lag (−) the current in the reference ele ment, as indicated by the station's an tenna monitor.

(ii) The ratio of the amplitude of the radio frequency current in each othe element to the current in the refe ence element, as indicated on the sta tion's antenna monitor.

(iii) The value of the radio frequen cy current at the base of each elemen and the ratio of the current in eac other element to the base current i the reference element. If there a substantial differences between th ratios established in paragrap (a)(2)(ii) of this section and the rati computed in this paragraphs (a)(2)(i and/or if there are substantial diffe ences between the parameters estab lished in paragraphs (a)(2) (i) and (i of this section and this paragrap (a)(2)(iii), and those used in the desig of the standard radiation pattern, full explanation of the reasons fo these differences shall be given.

(3) The actual field strength mea ured at each monitoring point estab lished in the various directions fo which a limiting field was specified i the instrument of authorization t gether with accurate and detailed de scription of each monitoring point t gether with ordinary snapshots, clea and sharp, taken with the fiel strength meter in its measuring pos tion and with the camera so locate that its field of view takes in as man pertinent landmarks as possible. In ad dition, the directions for proceeding t each monitoring point together with rough sketch or map upon which ha been indicated the most accessible ap proaches to the monitoring point should be submitted.

[36 FR 919, Jan. 20, 1971, as amended at 4 FR 36828, July 18, 1977; 49 FR 23348, Jun 6, 1984; 50 FR 32416, Aug. 12, 1985]

§ 73.152 Modification of directional antenna data.

(a) If, after construction and final adjustment of a directional antenna, a measured inverse distance field in any direction exceeds the field shown on the standard radiation pattern for the pertinent mode of directional operation, an application shall be filed, specifying a modified standard radiation pattern and/or such changes as may be required in operating parameters so that all measured effective fields will be contained within the modified standard radiation pattern.

(b) Normally, a modified standard pattern is not acceptable at the initial construction permit stage, before a proof-of-performance has been completed. However, in certain cases, where it can be shown that modification is necessary, a modified standard pattern will be acceptable at the initial construction permit stage. Following is a non-inclusive list of items to be considered in determining whether a modification is acceptable at the initial construction permit stage:

(1) When the proposed pattern is essentially the same as an existing pattern at the same antenna site. (e.g., A DA-D station proposing to become a DA-1 station.)

(2) Excessive reradiating structures, which should be shown on a plat of the antenna site and surrounding area.

(3) Other environmental factors; they should be fully described.

(4) Judgment and experience of the engineer preparing the engineering portion of the application. This must be supported with a full discussion of the pertinent factors.

(c) The following general principles shall govern the situations in paragraphs (a) and (b) in this section:

(1) Where a measured field in any direction will exceed the authorized standard pattern, the license application may specify the level at which the input power to the antenna shall be limited to maintain the measured field at a value not in excess of that shown on the standard pattern, and shall specify the common point current corresponding to this power level. This value of common point current will be specified on the license for that station.

(2) Where any excessive measured field does not result in objectionable interference to another station, a modification of construction permit application may be submitted with a modified standard pattern encompassing all measured fields. The modified standard pattern shall supersede the previously submitted standard radiation pattern for that station in the pertinent mode of directional operation. Following are the possible methods of creating a modified standard pattern:

(i) The modified pattern may be computed by making the entire pattern larger than the original pattern (i.e., have a higher RMS value) if the measured fields systematically exceed the confines of the original pattern. The larger pattern shall be computed by using a larger multiplying constant, k, in the theoretical pattern equation (Eq. 1) in § 73.150(b)(1).

(ii) Where the measured field exceeds the pattern in discrete directions, but objectionable interference does not result, the pattern may be expanded over sectors including these directions. When this "augmentation" is desired, it shall be achieved by application of the following equation:

$$E(\phi,\theta)_{aug} = \sqrt{\{E(\phi,\theta)_{std}\}^2 + A\{g(\theta)\cos(180\ D_A/S)\}^2}$$

where:

$E(\phi,\theta)_{std}$ is the standard pattern field at some particular azimuth and elevation angle, before augmentation, computed pursuant to Eq. 2, § 73.150(b)(1)(i).

$E(\phi,\theta)_{aug}$ is the field in the direction specified above, after augmentation.

$A = E(\phi',O)^2_{aug} - E(\phi',O)^2_{std}$ in which ϕ' is the central azimuth of augmentation.

$E(\phi',O)_{aug}$ and $E(\phi',O)_{std}$ are the fields in the horizontal plane at the central azimuth of augmentation.

NOTE: "A" must be positive, except during the process of converting non-standard patterns to standard patterns pursuant to the *Report and Order in Docket No. 21473*, and in making minor changes to stations with patterns developed during the conversion.

However, even when "A" is negative, "A" cannot be so negative that $E(\phi,\theta)_{aug}$ is less than $E(\phi,\theta)_{th}$ at any azimuth or vertical elevation angle.

$g(\theta)$ is defined in § 73.150(b)(1)(i).

S is the angular range, or "span", over which augmentation is applied. The span is centered on the central azimuth of augmentation. At the limits of the span, the augmented pattern merges into the unaugmented pattern. Spans may overlap.

D_A is the absolute horizontal angle between the azimuth at which the augmented pattern value is being computed and the central azimuth of augmentation. (D_A cannot exceed 1/2 S.)

In the case where there are spans which overlap, the above formula shall be applied repeatedly, once for each augmentation, in ascending order of central azimuth of augmentation, beginning with zero degrees representing true North. Note that, when spans overlap, there will be, in effect, an augmentation of an augmentation. And, if the span of an earlier augmentation overlaps the central azimuth of a later augmentation, the value of "A" for the later augmentation will be different than the value of "A" without the overlap of the earlier span.

(iii) A combination of paragraphs (c)(2) (i) and (ii), of this section, with (i) being applied before (ii) is applied.

(3) A Modified Standard Pattern shall be specifically labeled as such, and shall be plotted in accordance with the requirements of paragraph (b)(2) of § 73.150. The effective (RMS) field strength in the horizontal plane of $E(\phi,\theta)_{std}$, $E(\phi,\theta)_{th}$, and the root sum square (RSS) value of the inverse fields of the array elements (derived from the equation for $E(\phi,\theta)_{th}$), shall be tabulated on the page on which the horizontal plane pattern is plotted. Where sector augmentation has been employed in designing the modified pattern, the direction of maximum augmentation (i.e., the central azimuth of augmentation) shall be indicated on the horizontal plane pattern for each augmented sector, and the limits of each sector shall also be shown. Field values within an augmented sector, computed prior to augmentation, shall be depicted by a broken line.

(4) There shall be submitted, for each modified standard pattern, complete tabulations of final computed data used in plotting the pattern. In addition, for each augmented sector, the central azimuth of augmentation, span, and radiation at the central azimuth of augmentation ($E(\phi,\theta)_{aug}$) shall be tabulated.

(5) The parameters used in computing the modified standard pattern shall be specified with realistic precision. Following is a list of the maximum acceptable precision:

(i) Central Azimuth of Augmentation: to the nearest 0.1 degree.

(ii) Span: to the nearest 0.1 degree.

(iii) Radiation at Central Azimuth of Augmentation: 4 significant figures.

(d) Sample calculations for a modified standard pattern follow. First, assume the existing standard pattern in § 73.150(c). Then, assume the following augmentation parameters:

Augmentation number	Central azimuth	Span	Radiation at central azimuth
1	110	40	1,30
2	240	50	5
3	250	10	13

Following is a tabulation of part of the modified standard pattern:

Azimuth	0	30	60	Vertical angle
0	28.86	68.05	72.08	
105	1,299.42	872.14	254.21	
235	39.00	35.74	38.71	
247	100.47	66.69	32.78	

[46 FR 11992, Feb. 12, 1981]

§ 73.153 Field strength measurements in support of applications or evidence at hearings.

In the determination of interference, groundwave field strength measurements will take precedence over theoretical values, provided such measurements are properly taken and presented. When measurements of groundwave signal strength are presented, they shall be sufficiently complete in accordance with § 73.186 to determine the field strength at 1 mile in the pertinent directions for that station. The antenna resistance measurements required by § 73.136 need not be taken or submitted.

[44 FR 36037, June 20, 1979]

§ 73.154 AM directional antenna partial proof of performance measurements.

(a) A partial proof of performance consists of at least 10 field strength measurements made on each of the radials established in the latest complete proof of performance of the directional antenna system.

(b) The measurements are to be made within 2 to 10 miles (3 to 16 kilometers) from the center of the antenna array. When a monitoring point as designated on the station authorization is on a particular radial, one of the radial measurements must be made at that point.

(c) The results of the measurements are to be analyzed in either of two methods. Either the arithmetic average or the logarithmic average of the ratios of the field strength at each measurement point along each radial to the corresponding field strength in the most recent complete proof of performance may be used to establish the inverse distance fields. (The logarithmic average for each radial is the antilogarithm of the mean of the logarithms of the ratios of field strength (new to old) for each measurement location along a given radial).

(d) The result of the most recent partial proof of performance measurements and analysis is to be retained in the station records available to the FCC upon request.

[50 FR 47054, Nov. 14, 1985]

§ 73.157 Antenna testing during daytime.

(a) The licensee of a station using a directional antenna during daytime or nighttime hours may, without further authority, operate during daytime hours with the licensed nighttime directional facilities or with a nondirectional antenna when conducting monitoring point field strength measurements or antenna proof of performance measurements.

(b) Operation pursuant to this section is subject to the following conditions:

(1) No harmful interference will be caused to any other station.

(2) The FCC may notify the licensee to modify or cease such operation to resolve interference complaints or when such action may appear to be in the public interest, convenience and necessity.

(3) Such operation shall be undertaken only for the purpose of taking monitoring point field strength measurements or antenna proof of performance measurements, and shall be restricted to the minimum time required to accomplish the measurements.

(4) Operating power in the nondirectional mode shall be adjusted to the same power as was utilized for the most recent nondirectional proof of performance covering the licensed facilities.

[50 FR 30947, July 31, 1985]

§ 73.158 Directional antenna monitoring points.

(a) When a licensee of a station using a directional antenna system finds that a field monitoring point, as specified on the station authorization, is no longer accessible for use or is unsuitable because of nearby construction or other disturbances to the measured field, an informal application to change the monitoring point location is to be promptly submitted to the FCC in Washington, D.C. The application must include the following information:

(1) A partial proof of performance conducted on the radial containing the monitoring point to be changed.

(2) A written description of the routing to the new selected monitoring point.

(3) A map showing the location and routing to the new selected monitoring point.

(4) A photograph showing the new monitoring point in relation to nearby permanent landmarks that can be used in locating the point accurately at all times throughout the year. Do not use seasonal or temporary features in either the written descriptions or photographs as landmarks for locating field points.

(b) When the descriptive routing to reach any of the monitoring points as shown on the station license is no longer correct due to road or building construction or other changes, the licensee must prepare and file with the FCC, in Washington, DC, a request for a corrected station license showing the new routing description. A copy of the description is to be posted with the existing station license. The notification is to include the information specified in paragraphs (a) (2) and (3) of this section.

[47 FR 28387, June 30, 1982]

§ 73.160 Vertical plane radiation characteristics, f(θ).

(a) The vertical plane radiation characteristics show the relative field being radiated at a given vertical angle, with respect to the horizontal plane. The vertical angle, represented as θ, is 0 degrees in the horizontal plane, and 90 degrees when perpendicular to the horizontal plane. The vertical plane radiation characteristic is referred to as $f(\theta)$. The generic formula for $f(\theta)$ is:

$$f(\theta)=E(\theta)/E(O)$$

where:

$E(\theta)$ is the radiation from the tower at angle θ.

$E(O)$ is the radiation from the tower in the horizontal plane.

(b) Listed below are formulas for $f(\theta)$ for several common towers.

(1) For a typical tower, which is not top-loaded or sectionalized, the following formula shall be used:

$$f(\theta) = \frac{\cos(G\sin\theta) - \cos G}{(1 - \cos G)\cos\theta}$$

where:

G is the electrical height of the tower, not including the base insulator and pier. (In the case of a folded unipole tower, the entire radiating structure's electrical height is used.)

(2) For a top-loaded tower, the following formula shall be used:

$$f(\theta) = \frac{\cos B\cos(A\sin\theta) - \sin\theta\sin B\sin(A\sin\theta) - \cos(A+B)}{\cos\theta\,(\cos B - \cos(A+B))}$$

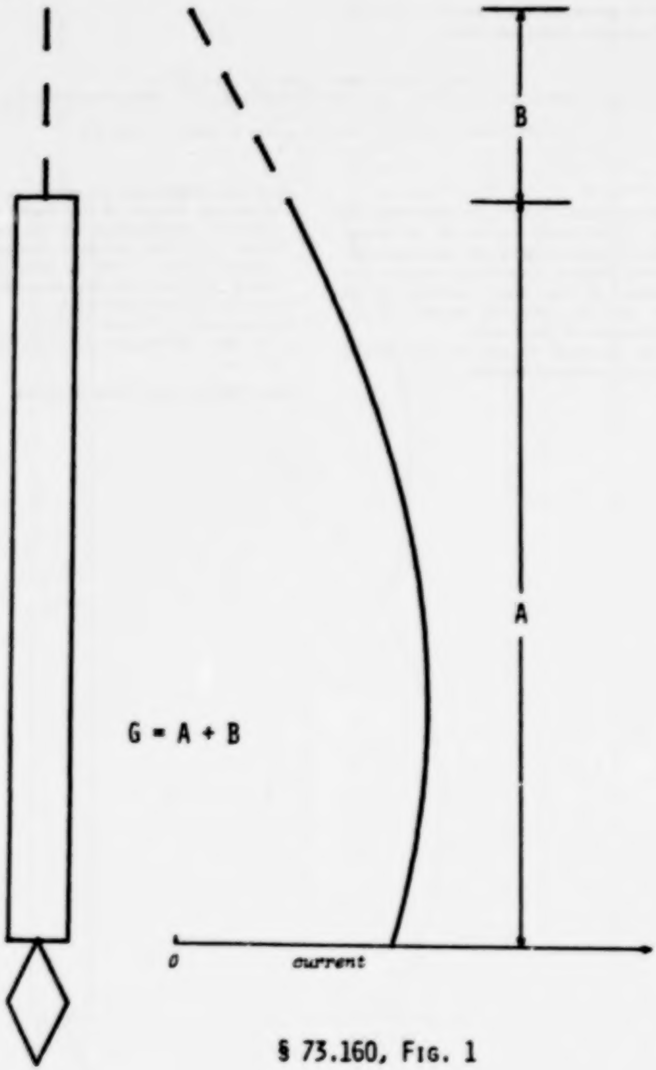
where:

A is the physical height of the tower, in electrical degrees, and

B is the difference, in electrical degrees, between the apparent electrical height (G, based on current distribution) and the actual physical height.

G is the apparent electrical height: the sum of A and B; A+B.

See Figure 1 of this section.


B
A
G = A + B
0
current

§ 73.160, Fig. 1

(3) For a sectionalized tower, the following formula shall be used:

$$f(\theta) = \frac{\{\sin \Delta\, [\cos B \cos (A \sin \theta) - \cos G] + \sin B\, [\cos D \cos(C \sin \theta) - \sin \theta \sin D \sin(C \sin \theta) - \cos \Delta \cos(A \sin \theta)]\}}{\cos \theta\, [\sin \Delta\, (\cos B - \cos G) + \sin B\, (\cos D - \cos \Delta)]}$$

where:

A is the physical height, in electrical degrees, of the lower section of the tower.

B is the difference between the apparent electrical height (based on current distribution) of the lower section of the tower and the physical height of the lower section of the tower.

C is the physical height of the entire tower, in electrical degrees.

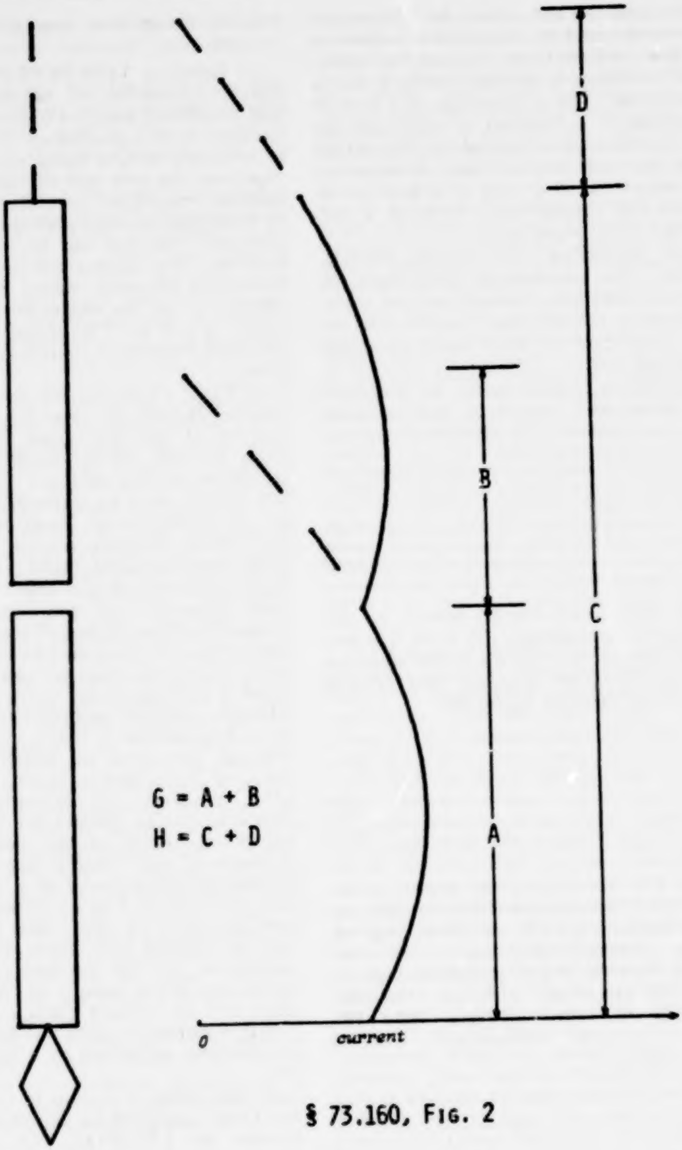
D is the difference between the apparent electrical height of the tower (based on current distribution of the upper section) and the physical height of the entire tower. D will be zero if the sectionalized tower is not top-loaded.

G is the sum of A and B; $A+B$.

H is the sum of C and D; $C+D$.

Δ is the difference between H and A; $H-A$.

See Figure 2 of this section.


D
B
C
A
G = A + B
H = C + D
0
current

§ 73.160, Fig. 2

(c) One of the above f(*θ*) formulas *must* be used in computing radiation in the vertical plane, unless the applicant submits a special formula for a particular type of antenna. If a special formula is submitted, it must be accompanied by a complete derivation and sample calculations. Submission of values for f(*θ*) only in a tabular or graphical format (i.e., without a formula) is not acceptable.

(d) Following are sample calculations. (The number of significant figures shown here should *not* be interpreted as a limitation on the number of significant figures used in actual calculations.)

(1) For a typical tower, as described in paragraph (b)(1) of this section, assume that G = 120 electrical degrees:

θ	f(*θ*)
0	1.0000
30	0.7696
60	0.3458

(2) For a top-loaded tower, as described in paragraph (b)(2) of this section, assume A = 120 electrical degrees, B = 20 electrical degrees, and G = 140 electrical degrees, (120 + 20):

θ	f(*θ*)
0	1.0000
30	0.7364
60	0.2960

(3) For a sectionalized tower, as described in paragraph (b)(3) of this section, assume A = 120 electrical degrees, B = 20 electrical degrees, C = 220 electrical degrees, D = 15 electrical degrees, G = 140 electrical degrees (120 + 20), H = 235 electrical degrees (220 + 15), and Δ = 115 electrical degrees (235 − 120):

θ	f(*θ*)
0	1.0000
30	0.5930
60	0.1423

[46 FR 11993, Feb. 12, 1981]

§ 73.182 Engineering standards of allocation.

(a) Sections 73.21 to 73.37 inclusive, govern allocation of facilities in the AM broadcast band of 535 to 1605 kHz. Section 73.21 establishes three classes of channels in this band, namely, clear channels for the use of high-powered stations, regional channels for the use of medium-powered stations, and local channels for the use of low-powered stations. The classes and power of AM broadcast stations which will be assigned to the various channels are set forth in § 73.21. The classifications of the AM broadcast stations are as follows:

(1) Class I stations are dominant stations operating on clear channels with powers of not less than 10 or more than 50 kW. These stations are designed to render primary and secondary service over an extended area and at relatively long distances, hence have their primary service areas free from objectionable interference from other stations on the same and adjacent channels and secondary service areas free from objectionable interference from stations on the same channels. (The secondary service area of a Class I station is not protected from adjacent channel interference. However, if it is desired to make a determination of the area in which adjacent channel groundwave interference (10 kHz removed) to skywave service exists, it may be considered as the area where the ratio of the desired 50% skywave of the Class I station to the undesired groundwave of a station 10 kHz removed is 1 to 4). From an engineering point of view, Class I stations may be divided into three groups and, hereafter, for the purpose of convenience, the three groups of Class I stations will be termed Class I-A, I-B or I-N in accordance with the assignment to channels allocated by § 73.25 (a) or (b).

(i) The Class I station in Group I-A are those assigned to the channels allocated by § 73.25 (a). The power of these stations shall be 50 kW. The Class I stations in this group are afforded protection as follows:

(A) *Daytime.* To the 0.1 mV/m groundwave contour from stations on the same channel, and to the 0.5 mV/m groundwave contour from stations on adjacent channels.

(B) *Nighttime.* To the 0.5 mV/m 50% skywave contour from stations on the same channel, and to the 0.5 mV/m groundwave contour from stations on adjacent channels.

(ii) The Class I stations in group I-B are those assigned to the channels allocated by § 73.25(b), on which duplicate operation is permitted, that is, other Class I or Class II stations operating unlimited time may be assigned to such channels. During nighttime hours of operation a Class I-N station is protected to the 100 uV/m 50 percent skywave contour and a Class I-B station of this group is protected to the 500 uV/m 50 percent skywave contour. During daytime hours of operation Class I-B and Class I-N stations are protected to the 100 uV/m groundwave contour from stations on the same channel. Protection is given to the 500 uV/m groundwave contour from stations on adjacent channels for both day and nighttime operation. The operating powers of Class I stations on these frequencies shall be not less than 10 kW nor more than 50 kW.

(iii) In Alaska there is a third group of Class I stations, designated as Class I-N. These stations operate on the channels allocated by § 73.25(a) or Section 73.25(b) with a minimum power of 10 kW and antenna efficiency of 175 mV/m for 1 kW. Stations operating on these channels in Alaska which have not been designated as Class I-N stations in response to licensee request will continue to be considered as Class II stations. During daytime hours a Class I-N station receives protection to the 100 uV/m groundwave contour from co-channel stations. During nighttime hours a Class I-N station receives protection to the 100 uV/m 50 percent skywave contour from cochannel stations. Protection is given to the 500 uV/m groundwave contour from stations on adjacent channels for both day and nighttime operation.

NOTE: In the Report and Order in MM Docket No. 83-807, the Commission designated 15 stations operating on U.S. clear channels as Class I-N stations. Eleven of these stations already have Class I-N facilities and are to be protected accordingly. Permanent designation of the other four stations as Class I-N is conditioned on their constructing minimum Class I-N facilities no later than December 31, 1989. During this period, until such facilities are obtained, temporary designation as Class I-N stations shall be applied, and calculations involving these stations should be based on existing facilities but with an assumed power of 10 kW. Thereafter, these stations are to be protected based on their actual Class I-N facilities. If any of these stations does not obtain Class I-N facilities in the period specified, it is to be protected as a Class II station based on its actual facilities. These four stations may increase power to 10 kW without regard to the impact on Class II co-channel stations. However, increases by these stations beyond 10 kW (or by existing Class I-N stations beyond their current power level) are subject to applicable protection requirements for co-channel Class II stations. Other stations not on the original list but which meet applicable requirements may obtain Class I-N status by seeking such designation from the Commission. If a power increase or other change in facilities by a station not on the original list is required to obtain minimum Class I-N facilities, any such application shall meet the interference protection requirements applicable to a Class I-N proposal on the channel.

(2) Class II stations are secondary stations which operate on clear channels with powers not less than 0.25 kW nor more than 50 kW, except that Class II-A stations shall not operate nighttime with less than 10 kW; Class II-C stations shall not operate nighttime with more than 1 kW, and Class II-S stations shall operate nighttime with less than 250 watts. Class II stations are required to use directional antennas or other means to avoid causing interference with the normally protected service areas of Class I stations or other Class II stations. (For special rules concerning Class II-A stations, see § 73.22.) These stations normally render primary service only, the area of which depends on the geographical location, power, and frequency. This may be relatively large but is limited by and subject to such interference as may be received from Class I stations. However, it is recommended that Class II stations be so located that the interference received from other stations will not limit the service area to greater than 2.5 mV/m groundwave contour nighttime and 0.5

mV/m groundwave contour daytime, which are the values for the mutual protection of this class of stations with other stations of the same class. There four exceptions:

(i) Class II-A stations are normally protected at night to the limit imposed by the co-channel Class I-A or Class I-N station;

(ii) Class II-B stations coming within § 73.21(a)(2)(ii)(D) are normally protected at night to the limit imposed by the co-channel Class I-A or Class I-N station or the higher limit, if any, imposed by previously authorized facilities of other stations; and

(iii) Class II-C stations are normally protected at nighttime to their 10 mV/m groundwave contour, or the higher limit if any imposed by previously authorized facilities of other stations.

(iv) Class II-S stations are not protected from interference during nighttime.

Note: There are additional restrictions in the use of the 14 channels listed in § 73.25(c). These restrictions are set forth in § 73.3571.

(3) Class III stations operate on regional channels and normally render primary service to the larger cities and the rural area contiguous thereto. They operate with powers not less than 0.25 kW and not more than 5 kW, and are normally protected to the 1500 uV/m goundwave contour nighttime and the 500 uV/m groundwave contour daytime; provided, however, that Class IV stations in the 48 conterminous United States may, during nighttime hours, treat all stations assigned in Alaska, Hawaii, Puerto Rico and the U.S. Virgin Islands on 1230, 1240, 1340, 1400, 1450 and 1490 kHz as if they were Class IV stations.

Note 1: Class III stations in Alaska, Hawaii, Puerto Rico and the U.S. Virgin Islands are permitted a maximum power of 50 kW day or night. Use of such higher power is subject to amendment of the U.S./Mexican Agreement and final disposition of NARBA. Pending such amendment, the maximum power permitted stations in these localities may not exceed 5 kW. Stations in the above-named places that are reclassified from Class IV to Class III stations under § 73.26(b) shall not be authorized to increase power to levels that, under the RSS procedure and the 50% exclusion rule in § 73.182(l) would increase the nighttime interference-free limit of cochannel Class IV stations in the counterminous United States.

Note 2: Stations that were classified as Class III-B, before the distinctions between Class III-A and Class III-B stations were removed, shall—insofar as AM applications filed before March 10, 1986 are concerned—remain normally protected during nighttime hours to their 4000 uV/m contour.

(4) Class IV stations operate on local channels, normally rendering primary service to a community and the suburban or rural areas, contiguous thereto, with powers not less than 0.25 kW, nor more than 1 kW, except as provided in § 73.21(c)(1) (for restrictions on daytime power of stations near the Mexican border see Note 2 in § 73.21. Such stations are normally protected to the 0.5 mV/m contour daytime. On local channels the separation required for the daytime protection shall also determine the nighttime separation. Where directional antennas are employed daytime by Class IV stations operating with more than 0.25 kW power, the separations required shall in no case be less than those necessary to afford protection, assuming nondirectional operation with 0.25 kW. In no case will 0.25 kW or greater nighttime power be authorized to a station unable to operate nondirectionally at 0.25 kW in the daytime. The actual nighttime limitation will be calculated.

Note: The following approximate method may be used. It is based on the assumption of 0.25 wavelength antenna height and 8 mV/m at one mile effective field for 250 watts power, using the 10% skywave field strength curve of Figure 2 of § 73.190. Zones defined by circles of various radii specified below are drawn about the desired station and the interfering 10% skywave signal from each station in a given zone is considered to be the value tabulated below. The effective interfering 10% skywave signal is taken to be the RSS value of all signals originating within these zones. (Stations beyond 500 miles are not considered.)

Zone	Inner radius	Outer radius	10 percent skywave signal (mV/m)
A		60	0.10
B	60	80	.12
C	80	100	.14
D	100	250	.16
E	250	350	.14

Zone	Inner radius	Outer radius	10 percent skywave signal (mV/m)
F	350	450	.12
G	450	500	.10

Where the power of the interfering station is not 250 watts, the 10% skywave signal should be adjusted by the square root of the ratio of the power to 250 watts.

(b) The class of any station is determined by the channel assignment, the power, and the field strength contour to which it renders service free of interference from other stations as determined by these standards. No station will be permitted to change to a class normally protected to a contour of less strength than the contour to which the station actually renders interference-free service. Any station of a class normally protected to a contour of less strength than that to which the station actually renders interference-free service, will be automatically reclassified according to the class normally protected, the minimum consistent with its power and channel assignment. Likewise, any station to which the interference is reduced so that service is rendered to a contour normally protected for a higher class will be automatically changed to that class if consistent with its power and channel assignment.

(c) When a station is already limited by interference from other stations to a contour of higher value than that normally protected for its class, this contour shall be the established standard for such station with respect to interference from all other stations.

(d) The several classes of AM broadcast stations have in general three service areas, i.e., primary, secondary and intermittent service areas. (See § 73.14 for the definitions of primary, secondary and intermittent service areas.) Class I stations render service to all three areas. Class II stations render service to a primary area but the secondary and intermittent service areas may be materially limited or destroyed due to interference from other stations, depending on the station assignments involved. Class III and IV stations usually have only primary service areas, as interference from other stations generally prevents any secondary service and may limit the intermittent service area. However, complete intermittent service may be obtained in many cases depending on the station assignments involved.

(e) The groundwave signal strength required to render primary service is 2 mV/m for communities with populations of 2,500 or more; and 0.5 mV/m for communities with populations of less than 2,500. See § 73.184 for curves showing distance to various groundwave field strength contours for different frequencies and ground conductivities, and also see § 73.183, "Groundwave signals."

(f) The FCC will authorize the directional antenna for a Class IV station for daytime operation only with power in excess of 0.25 kW. In computing the degrees of protection which such antenna will afford, the radiation produced by this antenna will be assumed to be no less, in any direction, than that which would result from non-directional operation using a single element of the directional array, with 0.25 kW.

(g) All classes of broadcast stations have primary service areas subject to limitation by fading and noise, and interference from other stations to the contours set out for each class of station.

(h) Secondary service is delivered in the areas where the skywave for 50% or more of the time has a field strength of 0.5 mV/m or greater (0.1 mV/m in Alaska). It is not considered that satisfactory secondary service can be rendered to cities unless the skywave approaches in value the groundwave required for primary service. The secondary service is necessarily subject to some interference and extensive fading whereas the primary service area of a station is subject to no objectionable interference or fading. Class I stations only are assigned on the basis of rendering secondary service.

NOTE: Standards have not been established for objectionable fading as such standards would necessarily depend on the receiver characteristics which have been changed considerably in this regard during the last several years. Selective fading causing audio distortion and the signal fading below the noise level are the objectionable characteristics of fading on modern design receivers. The AVC circuits in the better designed modern receivers in general maintain the audio output sufficiently constant to be satisfactory during most fading.

(i) The intermittent service is rendered by the groundwave and begins at the outer boundary of the primary service area and extends to the value of signal where it may be considered as having no further service value. This may be down to only a few uV/m in certain areas and up to several millivolts in other areas of high noise level, interference from other stations, or objectionable fading at night. The intermittent service area may vary widely from day to night and generally varies from time to time as the name implies. Only Class I stations are assigned for protection from interference from other stations into the intermittent service area.

(j) Section 73.23 provides that the several classes of broadcast stations may be licensed to operate unlimited time, limited time, daytime, sharing time, and specified hours, with full explanation given in the section (see § 73.38 for restriction on limited time authorizations).

(k) Section 73.24 sets out the general requirements for obtaining an increase in facilities of a licensed station and for a new station. Sections 73.24(b) and 73.37 concern the matter of interference that may be caused by a new assignment or increase in facilities of an existing assignment.

(l) Objectionable nighttime interference from another broadcast station is the degree of interference produced when, at a specified field strength contour with respect to the desired station, the field strengths of an undesired station (or the root-sum-square value of field strengths of two or more stations on the same frequency) exceeds for 10% or more of the time the values set forth in these standards.

(1) With respect to the root-sum-square values of interfering field strengths referred to in this section (except in the case of Class IV stations on local channels and interfering signals to Class II-S stations) calculation is accomplished by considering the signals in order of decreasing magnitude, adding the squares of the values and extracting the square root of the sum, excluding those signals which are less than 50% of the RSS values of the higher signals already included.

(2) The RSS value will not be considered to be increased when a new interfering signal is added which is less than 50% of the RSS value of the interference from existing stations, and which at the same time is not greater than the smallest signal included in the RSS value of interference from existing stations.

(3) It is recognized that application of the above "50% exclusion" method of calculating the RSS interference may result in some cases in anomalies wherein the addition of a new interfering signal or the increase in value of an existing interfering signal will cause the exclusion of a previously included signal and may cause a decrease in the calculated RSS value of interference. In order to provide the Commission with more realistic information regarding gains and losses in service (as a basis for determination of the relative merits of a proposed operation) the following alternate method for calculating the proposed RSS values of interference will be employed wherever applicable.

(4) In the cases where it is proposed to add a new interfering signal which is not less than 50% of the RSS value of interference from existing stations or which is greater than the smallest signal already included to obtain this RSS value, the RSS limitation after addition of the new signal shall be calculated without excluding any signal previously included. Similarly, in cases where it is proposed to increase the value of one of the existing interfering signals which has been included in the RSS value, the RSS limitation after the increase shall be calculated without excluding the interference from any source previously included.

(5) If the new or increased signal proposed in such cases is ultimately authorized, the RSS values of interference to other stations affected will thereafter be calculated by the "50% exclusion" method without regard to this alternate method of calculation.

(6) Examples of RSS interference calculations:

(i) Existing interferences:

Station No. 1—1.0 mV/m.
Station No. 2—0.60 mV/m.
Station No. 3—0.59 mV/m.
Station No. 4—0.58 mV/m.

The RSS value from Nos. 1, 2 and 3 is 1.31 mV/m: therefore interference from No. 4 is excluded for it is less than 50% of 1.31 mV/m.

(ii) Station A receives interference from:

Station No. 1—1.0 mV/m.
Station No. 2—0.60 mV/m.
Station No. 3—0.59 mV/m.

It is proposed to add a new limitation—0.68 mV/m. This is more than 50% of 1.31 mV/m, the RSS value of Nos. 1, 2 and 3. The RSS value of Station No. 1 and of the proposed station would be 1.21 mV/m which is more than twice as large as the limitation from Station No. 2 or No. 3. However, under the above provision the new signal and the three existing interferences are nevertheless calculated for purposes of comparative studies, resulting in an RSS value of 1.47 mV/m. However, if the proposed station is ultimately authorized, only No. 1 and the new signal are included in all subsequent calculations for the reason that Nos. 2 and 3 are less than 50% of 1.21 mV/m, the RSS value of the new signal and No. 1.

(iii) Station A receives interference from:

Station No. 1—1.0 mV/m.
Station No. 2—0.60 mV/m.
Station No. 3—0.59 mV/m.

No. 1 proposes to increase the limitation it imposes on Station A to 1.21 mV/m. Although the limitations from stations Nos. 2 and 3 are less than 50% of the 1.21 mV/m limitation, under the above provision they are nevertheless included for comparative studies, and the RSS limitation is calculated to be 1.47 mV/m. However, if the increase proposed by Station No. 1 is authorized, the RSS value then calculated is 1.21 mV/m because Stations Nos. 2 and 3 are excluded in view of the fact that the limitations they impose are less than 50% of 1.21 mV/m.

(m) Objectionable interference from a station on the same channel shall be considered to exist to a station when, at the field strength contour specified in paragraph (s) of this section with respect to the class to which the station belongs, the field strength of an interfering station (or the root-sum-square value of the field strengths of two or more interfering stations) operating on the same channel, exceeds for ten (10) percent or more of the time the value of the permissible interfering signal set forth opposite such class in paragraph (s) of this section.

(n) Objectionable interference from a station on an adjacent channel shall be considered to exist to a station when, at the normally protected contour of a desired station, the field strength of the ground wave of an undesired station operating on an adjacent channel (or the root-sum-square value of the field strengths of two or more such undesired stations operating on the same adjacent channel) exceeds a value specified in paragraph (t) of this section.

(o) For the purpose of estimating the coverage and the interfering effects of stations in the absense of field strength measurements, use shall be made of Figure 8 of § 73.190, which describes the estimated effective field for one kilowatt power input of simple vertical omnidirectional antennas of various heights with ground systems of at least 120 one-quarter wave-length radials. Certain approximations, based on the the curve or other appropriate theory, may be made when other than such antennas and ground systems are employed, but in any event the effective field to be employed shall not be less than given in the following:

Class of station	*Effective field* (at 1 km)
I-A and I-B	362 mV/m.
I-N, II and III	282 mV/m.
IV	241 mV/m.

In case a directional antenna is employed, the interfering signal of a broadcasting station will vary in different directions, being greater than the above values in certain directions and less in others depending upon the design and adjustment of the directional antenna system. To determine the interference in any direction the measured or calculated radiated field (unabsorbed field intensity at 1 kilometer from the array) must be used in conjuction with the appropriate propagation curves. (See § 73.185 for further discussion and solution of a typical directional antenna case.)

NOTE: For Class III stations in Alaska, Hawaii, Puerto Rico and the U.S. Virgin Islands, 241 uV/m shall be used.

(p) The existence or absence of objectionable groundwave interference from stations on the same or adjacent channels shall be determined by actual measurements made in accordance with the method described in § 73.186, or, in the absence of such measurements, by reference to the propagation curves of § 73.184. The existence or absence of objectionable interference due to skywave propagation shall be determined by reference to the appropriate formulas set forth in § 73.190 and the appropriate propagation curves in Figure 1a, 1b or Figure 2 of § 73.190.

(q) *Computation of Skywave Field Strength Values:* (1) *Fifty Percent Skywave Field Strength Values (Clear Channel)* In computing the fifty percent skywave field strength values of a Class I-A or I-B clear channel station, use shall be made of Figure 1a of § 73.190 entitled "Skywave Field Strength" for 50 percent of the time. In computing the fifty percent skywave field strength values of a Class I-N station (in Alaska), use shall be made of the formula in § 73.190(c)(1) for deriving such values.

(2) *Ten Percent Skywave Field Strength Values (Clear Channel).* In computing the 10% skywave field strength for stations on clear channels on a single signal basis, the curve in Figure 1a and the formula in § 73.190(b)(2) shall be used unless one or both of the stations being considered are in Alaska: in such a case, the formula included in § 73.190(c)(2) should be used to calculate the 10% values for both stations. In computing the 10% skywave field strength for stations on clear channels on an RSS basis, the formula in § 73.190(c)(2) shall be used in computing the RSS of a station in Alaska. In computing the RSS of a station not in Alaska, the formula in § 73.190(c)(2) shall be used in computing the contribution from stations in Alaska, and the formula in § 73.190(b)(2) shall be used in computing contributions from stations not in Alaska.

(3) *Regional and Local Channels.* In computing the 10% skywave field strength values for stations on a regional channel, on an RSS basis, the formula in § 73.190(c)(2) shall be used in computing the RSS of a station in Alaska. In computing the RSS of a station not in Alaska, the formula in § 73.190(c)(2) shall be used in computing the contribution from stations in Alaska, and the appropriate curve in Figure 2 shall be used in computing contributions from stations not in Alaska. (In the case of Class IV stations on local channels, simplifying assumptions may be made. see Note in paragraph (a)(4) of this section.)

(4) *Determination of Angles of Departure.* In calculating skywave field strength for stations on all channels, the pertinent vertical angle shall be determined by use of the formulas in § 73.190(d).

NOTE: In the case of applications tendered on or before September 29, 1965, for new or changed facilities on the clear channels listed in § 73.25(b), Figure 1 of § 73.190, entitled "Average Skywave Field Strength" shall be used instead of Figure 1a, and Figure 6 of § 73.190, entitled "Variation with Distance of Two Important Parameters in the Theory of Skywave Propagation," shall be used instead of Figure 6a.

(r) The distance to any specified groundwave field strength contour for any frequency may be determined from the appropriate curves in § 73.184 entitled "Ground Wave Field Strength vs. Distance."

(s) Protected service contours and permissible interference signals for broadcast stations are as follows (for Class I and Class II-A stations, see paragraph (a) of this section):

Class of station	Class of channel used	Permissible power	Signal strength contour of area protected from objectionable interference [1]		Permissible interfering signal on same channel [2]	
			Day [3]	Night	Day	Night [4]
I–A	Clear	50 kW	SC 100 µV/m. AC 500 µV/m.	SC 500 µV/m(50% skywave).[7] AC 500 µ [2]	5 µV/m	25 µV/m.[7]
I–B	do	10 kW to 50 kW	SC 100 µV/m. AC 500 µV/m.	SC 500 µV/m 50% skywave. AC 500 µV/m [2].	5 µV/m	25 µV/m.
I–N	do	50 kW	SC 100 µV/m. AC 500 µV/m.	SC 100 µV/m 50% skywave. AC 500 µV/m	5 µV/m	5 µV/m.
II–A	do	0.25 kW to 50 kW (daytime). 10 kW to 50 kW (nighttime).	500 µV/m	500 µV/m [3]	25 µV/m	25 µV/m.
II–B	do	0.25 kW to 50 kW	500 µV/m	2,500 µV/m [3], [5]	do	125 µV/m.
II–C	do	0.25 kW to 1 kW	500 µV/m	10,000 µV/m [8]	do	500 µV/m.
II–D	do	0.25 kW to 50 kW (daytime)	500 µV/m	Not prescribed	do	Not prescribed.
II–S	do	0.25 kW to 50 kW (daytime) less than 0.25 (nighttime).	500 µV/m	do	do	Do.
III	Regional	0.25 kW to 5 kW	500 µV/m	2,500 µV/m [3], [9]	do	125 µV/m.
III–S	do	0.25 kW to 5 kW (daytime) less than 0.25 kW nighttime.	500 uV/m	Not prescribed	do	Not prescribed
IV	Local	0.25 to 1 kW	500 µV/m	Not prescribed [6]	do	Not prescribed.

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[1] When a station is already limited by interference from other stations to a contour of higher values than that normally protected for its class, this contour shall be the established standard for such station with respect to interference from all other stations.

[2] For adjacent channel, see paragraph (t) of this section.

[3] Groundwave.

[4] Skywave field strength for 10 percent of more of the time.

[5] These values are with respect to interference from all stations except Class I–B, which stations may cause interference to a field strength contour of higher value. However, it is recommended that Class II stations be so located that the interference received from Class I–B stations will not exceed these values. If the Class II stations are limited by Class I–B stations to higher values, then such values shall be the established standard with respect to protection from all other stations.

[6] See paragraph (a)(4) of this section and Note 1 to paragraph (a)(3).

[7] Class I–A stations on channels reserved for the exclusive use of one station during nighttime hours are protected from co-channel interference on that basis.

[8] Applies only to nighttime operations of Class II–C stations coming within § 73.21(a)(iii), and to the operation of limited-time Class II–D stations during nighttime hours other than those during which they were authorized to operate as of June 1, 1980.

[9] During nighttime hours, Class IV stations in the conterminous 48 states may treat all Class III stations assigned to 1230, 1240, 1340, 1400, 1450 and 1490 kHz in Alaska, Hawaii, Puerto Rico and the U.S. Virgin Islands as if they were Class IV stations.

Note.—SC = Same channel. AC = Adjacent channel.

(t) The following table is to be used for determining the minimum ratio of the field strength of a desired to an undesired signal for interference free service. In the case of a desired groundwave signal interfered with by two or more skywave signals on the same frequency, the RSS value of the latter is used. From the table, it is apparent that in many cases stations operating on channels 10 and 20 kHz apart may be operated with antenna systems side by side or otherwise in proximity without any indications of interference if the interference is defined only in terms of permissible ratios listed in this paragraph. As a practical matter, serious interference problems may arise when two or more stations with the same general service area are operated on channels 10, 20, and 30 kHz apart.

Frequency separation of desired to undesired signals	Desired groundwave to		Desired 5 percent skywave to undesired 10 percent skywave
	Undesired ground wave	Undesired 10 percent skywave	
0 kc/s	20:1	20:1	20:1
10 kc/s	1:1	1:5	[1]

[1] The secondary service area of a Class I station is not protected from adjacent channel interference. However, if it is desired to make a determination of the area in which adjacent channel groundwave interference (10 kc/s removed) to skywave service exists, it may be considered as the area where the ratio of the desired 50 percent skywave of the Class I station to the undesired groundwave of a station 10 kc/s removed is 1 to 4.

(u) Two stations, one with a frequency twice that of the other, should not be assigned in the same groundwave service area unless special precautions are taken to avoid interference from the second harmonic of the lower frequency. In selecting a frequency, consideration should be given to the fact that occasionally the frequency assignment of two stations in the same area may bear such a relation to the intermediate frequency of some broadcast receivers as to cause so-called "image" interference. However, since this can usually be rectified by readjustment of the intermediate frequency of such receivers, the Commission in general will not take this kind of interference into consideration in allocation problems.

(v) Two stations operating with synchronized carriers and carrying the identical program will have their groundwave service subject to some distortion in areas where the signals from the two stations are of comparable strength. For the purpose of estimating coverage of such stations areas in which the signal ratio is between 1 to 2 and 2 to 1 will not be considered as having satisfactory service.

NOTE: Two stations are considered to be operated synchronously when the carriers are maintained within 0.2 Hz of each other and they transmit identical programs.

[28 FR 13574, Dec. 14, 1963]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 73.182, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 73.183 Groundwave signals.

(a) Interference that may be caused by a proposed assignment or an existing assignment during daytime hours should be determined, when possible, by measurements on the frequency involved or on another frequency over the same terrain and by means for the curves in § 73.184 entitled "Ground Wave Field Strength versus Distance."

(b) In determining interference based upon field strength measurements, it is necessary to do the following: First, establish the outer boundary of the protected service area of the desired station in the direction of the station that may cause interference to it. Second, at this boundary, measure the interfering signal from the undesired station. The ratio of the desired to the undesired signal given in § 73.182(t) should be applied to the measured signals and if the required ratio is observed, no objectionable interference is foreseen. When measurements of both the desired and undesired stations are made in one area to determine the point where objectionable interference from groundwave signals occur or to establish other pertinent contours, several measurements of each station shall be made within a few miles of this point or contour. The effective field of the antennas in the pertinent directions of the stations must be established and all measurements must be made in accordance with § 73.186.

NOTE: International standards have not been established for determining ground conductivity by field strength measurements. Therefore, groundwave field strength measurements will not be accepted or considered for the purpose of establishing that interference to a station in a foreign country other than Canada, or that the signal strength at the border thereof, would be less than indicated by the application of the ground conductivity maps and engineering standard contained in this part and applicable international agreements. Satisfactory groundwave measurements offered for the purpose of demonstrating values of conductivity other than those shown by Figure M3 in problems involving protection of Canadian stations will be considered only if, after review thereof, the appropriate agency of the Canadian government notifies the Commission that they are acceptable for such purpose.

(c)(1) In all cases where measurements taken in accordance with the requirements are not available, the groundwave strength must be determined by means of the pertinent map of ground conductivity and the groundwave curves of field strength versus distance. The conductivity of a given terrain may be determined by measurements of any broadcast signal traversing the terrain involved. Figure M3 (See Note 1) shows the conductivity throughout the United States by general areas of reasonably uniform conductivity. When it is clear that only one conductivity value is involved, Figure R3 of § 73.190, may be used. It is a replica of Figure M3, and is contained in these standards. In all other situations Figure M3 must be employed. It is recognized that in areas of limited size or over a particular path, the conductivity may vary widely from the values given; therefore, these maps are to be used only when accurate and acceptable measurements have not been made.

(2) For determinations of interference and service requiring a knowledge of ground conductivities in other countries, the ground conductivity maps comprising Appendix 1 to Annex 2 of each of the following international agreements may be used:

(i) For Canada, the U.S.-Canada AM Agreement, 1984;

(ii) For Mexico, the U.S.-Mexico AM Agreement, 1986; and

(iii) For other Western Hemisphere countries, the Regional Agreement for the Medium Frequency Broadcasting Service in Region 2.

Where different conductivities appear in the maps of two countries on opposite sides of the border, such differences are to be considered as real, even if they are not explained by geophysical cleavages.

(d) Example of determining interference by the graphs in § 73.184:

It is desired to find whether objectionable interference exists between a 5 kW Class III station on 990 kHz and a 1 kW Class III station on the adjacent channel of 1000 kHz. The spacing between the two stations is 165 kilometers and both stations operate nondirectionally with antenna systems which produce an effective field of 282 mV/kW at one kilometer. (See § 73.185 in case of use of directional antennas.) The conductivity at each station and of the intervening terrain is determined to be 6 mS/m. The protection to Class III stations during daytime is to the 500 uV/m (0.5 mV/m) contour. The distance to the 0.5 mV/m contour of the 1 kW station is determined by the use of the appropriate curve in § 73.184, Graph 12. Since the curve is plotted for 100 mV/m at 1 kilometer, to find the distance to the 0.5 mV/m contour of the 1 kW station, it is necessary to determine the distance to the 0.1773 mV/m contour.

$$(100 \times 0.5/282 = 0.1773)$$

Using the 6 mS/m curve, the estimated radius of the 0.5 mV/m contour is seen to be 64.5 kilometers. Subtracting this distance from the distance between the two stations leaves 100.5 kilometers. Using the same propagation curve, the signal from the 5 kW station at this distance is seen to be 0.251 mV/m. Since a protection ratio of one to one, desired to undesired signal, applies to stations separated by 10 kHz, the undesired signal could have a value up to 0.5 mV/m without causing objectionable interference. Consequently, there would be no mutually objectionable interference between the two stations. Had the undesired signal been found to be greater than 0.5 mV/m, objectionable interference would then have existed. For co-channel operation, a desired to undesired signal ratio of no less than 20 to 1 is required to avoid causing objectionable interference.

(e) Where a signal traverses a path over which different conductivities exist, the distance to a particular groundwave field strength contour shall be determined by the use of the equivalent distance method. Reasonably accurate results may be expected in determining field strengths at a distance from the antenna by application of the equivalent distance method when the unattenuated field of the antenna, the various ground conductivities and the location of discontinuities are known. This method considers a wave to be propagated across a given conductivity according to the curve for a homogeneous earth of that conductivity. When the wave crosses from a region of one conductivity into a region of a second conductivity, the equivalent distance of the receiving point from the transmitter changes abruptly but the field strength does not. From a point just inside the second region the transmitter appears to be at that distance where, on the curve for a homogeneous earth of the second conductivity, the field strength equals the value that occurred just across the boundary in the first region. Thus the equivalent distance from the receiving point to the transmitter may be either greater or less than the actual distance. An imaginary transmitter is considered to exist at that equivalent distance. This technique is not intended to be used as a means of evaluating unattenuated field or ground conductivity by the analysis of measured data. The method to be employed for such determinations is set out in § 73.186.

(f) An example of the equivalent distance method follows:

It is desired to determine the distance to the 0.5 mV/m and 0.025 mV/m contours of a station on a frequency of 1000 kHz with an inverse distance field of 100 mV/m at one kilometer being radiated over a path having a conductivity of 10 mS/m for a distance of 20 kilometers, 5 mS/m for the next 30 kilometers and 15 mS/m thereafter. Using the appropriate curve in § 73.184, Graph 12, at a distance of 20 kilometers on the 10 mS/m curve, it is seen that the field strength is 2.86 mV/m. On the 5 mS/m curve, the equivalent distance to this field strength is seen to be 14.9 kilometers, which is 5.1 (20 − 14.9) kilometers nearer to the transmitter. Continuing on this propagation curve, the distance to a field strength of 0.5 mV/m is seen to be 36.4 kilometers. The actual length of the path travelled, however, is 41.5 (36.4 + 5.1) kilometers. Continuing on this propagation curve to the conductivity change at 44.9 (50 − 5.1) kilometers, it is seen that the field strength is 0.257 mV/m. On the 15 mS/m propagation curve, the equivalent distance to this field strength is seen to be 94 kilometers, which changes the effec-
tive path length by 49.1 (94 − 44.9) kilo
ters. Continuing on this propagation cur
the distance to a field strength of 0.025 m
m is seen to be 231 kilometers. The act
length of the path travelled, however, is 1
(231 + 5.1 − 49.1) kilometers.

[28 FR 13574, Dec. 14, 1963, as amended
44 FR 36037, June 20, 1979; 48 FR 90
Mar. 3, 1983; 50 FR 18822, May 2, 1985;
FR 24522, June 11, 1985; 51 FR 9065, Ma
24, 1986; 54 FR 39736, Sept. 28, 1989]

§ 73.184 Groundwave field streng graphs.

(a) Graphs 1 to 19 show, for each
20 frequencies, the computed values
groundwave field strength as a fun
tion of groundwave conductivity an
distance from the source of radiatio
The groundwave field strength is he
considered to be that part of the ver
cal component of the electric fie
which has not been reflected from th
ionosphere nor from the troposphe
These 20 families of curves are plott
on log-log graph paper and each is
be used for the range of frequenci
shown thereon. The curves themselv
were generated by straight-line co
nection of the plotted compute
values of groundwave field strength
a function of distance. The compute
and plotted points are sufficiently n
merous and closely spaced that th
error introduced by straight-line inte
polation is neligible. Computations a
based on a dielectric constant of th
ground (referred to air as unity) equ
to 15 for land and 80 for sea water an
for the ground conductivities (e
pressed in mS/m) given on the curve
The curves show the variation of th
groundwave field strength with di
tance to be expected for transmissio
from a vertical antenna at the surfa
of a uniformly conducting spheric
earth with the groundwave constan
shown on the curves. The curves ar
for an antenna power of such efficie
cy and current distribution that th
inverse distance (unattenuated) fiel
is 100 mV/m at 1 kilometer. Th
curves are valid at distances large co
pared to the dimensions of the anten
na for other than short vertical antennas.

(b) The inverse distance field (10
mV/m divided by the distance in kil
meters) corresponds to the ground

wave field intensity to be expected from an antenna with the same radiation efficiency when it is located over a perfectly conducting earth. To determine the value of the groundwave field intensity corresponding to a value of inverse distance field other than 100 mV/m at 1 kilometer, multiply the field strength as given on these graphs by the desired value of inverse distance field at 1 kilometer divided by 100; for example, to determine the groundwave field strength for a station with an inverse distance field of 2700 mV/m at 1 kilometer, simply multiply the values given on the charts by 27. The value of the inverse distance field to be used for a particular antenna depends upon the power input to the antenna, the nature of the ground in the neighborhood of the antenna, and the geometry of the antenna. For methods of calculating the interrelations between these variables and the inverse distance field, see "The Propagation of Radio Waves Over the Surface of the Earth and in the Upper Atmosphere," Part II, by Mr. K.A. Norton, Proc. I.R.E., Vol. 25, September 1937, pp. 1203-1237.

NOTE: The computed values of field strength versus distance used to plot Graphs 1 to 19 are available in tabular form. Copies of these tabulations may be ordered from the FCC official copy center whose name and address may be obtained by calling or writing the Consumer Affairs Office, Federal Communications Commission, Washington, DC 20554, (202) 632-7000.

(c) At sufficiently short distances (say less than 35 miles), such that the curvature of the earth does not introduce an additional attenuation of the waves, the graphs were computed by means of the plane earth formulas given in the paper, "The Propagation of Radio Waves Over the Surface of the Earth and in the Upper Atmosphere," Part I, by Mr. K. A. Norton, Proc. I.R.E., Vol. 24, October 1936, pp. 1367-1387. At larger distances the additional attenuation of the waves which is introduced by the effect of the curvature of the earth was introduced by the methods outlined in the papers, "The Diffraction of Electromagnetic Waves from an Electrical Point Source round a Finitely Conducting Sphere, with Applications to Radiotelegraphy and the Theory of the Rainbow," by Balth van der Pol and H. Bremmer, Part I, Phil. Mag., Vol. 24, p. 141, July 1937, Part II, Phil. Mag., Vol. 24, p. 82, Suppl., November 1937, "Ergebnisse einer Theorie ueber die Fortpflanzung elektron magnetischer Wellen ueber eine Kugel endlicher Leitfahigkeit," by Balth van der Pol and H. Bremmer, Hochfrequenztechnik und Elektroakustik, Band 51, Heft 6, June 1938, "Further Note on the Propagation of Radio Waves over a Finitely Conducting Spherical Earth," by Balth van der Pol and H. Bremmer, Phil. Mag., Vol. 27, p. 261, March 1939. In order to allow for the refraction of the radio waves in the lower atmosphere due to the variation of the dielectric constant of the air with height above the earth, a radius of the earth equal to 4/3 the actual radius was used in the computations for the effect of the earth's curvature in the manner suggested by C. R. Burrows, "Radio Propagation over Spherical Earth," Proc. I.R.E., May 1935; i.e., the distance corresponding to a given value of attenuation due to the curvature of the earth in the absence of air refraction was multiplied by the factor $(4/3) = 1.21$. The amount of this refraction varies from day to day and from season to season, depending on the air mass conditions in the lower atmosphere. If k denotes the ratio between the equivalent radius of the earth and the true radius, the following table gives the values of k for several typical air masses encountered in the United States.

Air mass type	k	
	Summer	Winter
Tropical Gulf—T_g	1.53	1.43
Polar Continental—P_c	1.31	1.25
Superior—S	1.25	1.25
Average	1.33	

It is clear from this table that the use of the average value of $k = 4/3$ is justified in obtaining a single correction for the systematic effects of atmospheric refraction.

(d) Provided the value of the dielectric constant is near 15, the curves of

Graphs 1 to 19 may be compared with experimental data to determine the appropriate values of the ground conductivity and of the inverse distance field strength at 1 kilometer. This is accomplished simply by plotting the measured fields on transparent log-log graph paper similar to that used for Graphs 1 to 19 and superimposing this chart over the graph corresponding to the frequency involved. The log-log graph sheet is then shifted vertically until the best fit is obtained with one of the curves on the graph; the intersection of the inverse distance line on the graph with the 1 kilometer abscissa on the chart determines the inverse distance field strength at 1 kilometer. For other values of dielectric constant, the following procedure may be used for a determination of the dielectric constant of the ground, conductivity of the ground and the inverse distance field strength at 1 mile. Before the results of such determinations are submitted to the FCC, they must be converted to equivalent metric units. Graph 20 gives the relative values of groundwave field strength over a plane earth as a function of the numerical distance p and phase angle b. On graph paper with coordinates similar to those of Graph 20, plot the measured values of field strength as ordinates versus the corresponding distances from the antenna in miles as abscissae. The data should be plotted only for distances greater than one wavelength (or, when this is greater, five times the vertical height of the antenna in the case of a single element, i.e., nondirectional antenna or 10 times the spacing between the elements of a directional antenna) and for distances of less than $50f^{1/3}/_{\mathrm{mHz}}$ miles (i.e., 50 miles at 1 mHz). Then, using a light box, place the sheet with the data plotted on it over the sheet with the curves of Graph 20 and shift the data sheet vertically and horizontally (making sure that the vertical lines on both sheets are parallel) until the best fit with the data is obtained with one of the curves on Graph 20. When the two sheets are properly lined up, the value of the field strength corresponding to the intersection of the inverse distance line of Graph 20 with the 1 mile abscissa on the data sheet is the inverse distance field strength at 1 mile, and the values of the numerical distance at 1 mile p_1 and of b are also determined. Knowing the values of b and p_1 (the numerical distance at one mile), we may substitute in the following approximate values of the ground conductivity and dielectric constant.

First solve for χ by substituting the known values of p_1, $(R_t)_1$ and cos b in Equation 1. Equation 2 may then be solved for δ and Equation 3 for ϵ. At distances greater than $50/f^{1/3}/_{\mathrm{mHz}}$ miles the curves of Graph 20 do not give the correct relative values of field strength since the curvature of the earth weakens the field more rapidly than these plane earth curves would indicate. Thus, no attempt should be made to fit experimental data to these curves at the larger distances.

NOTE: For other values of dielectric constant, use can be made of the computer program which was employed by the FCC in calculating the points used for plotting the curves in Graphs 1 to 19. A printout of this program can be ordered from the FCC official copy center whose name and address may be obtained by calling or writing the Consumer Affairs Office, Federal Communications Commission, Washington, DC 20554 (202) 632-7000.

$$\chi \cong \frac{\pi}{p} \cdot \left(R/\lambda \right)_1 \cdot \cos b \qquad \text{Eq. 1}$$

$$\left(R/\lambda \right)_1 = \text{Number of wavelengtns in 1 mile.}$$

$$\delta_{e.m.u.} = \frac{\chi f_{mHz}}{17.9731} \cdot 10^{-14} \qquad \text{Eq. 2}$$

$\delta_{e.m.u.}$=Conductivity of the ground expressed in electromagnetic units.
f_{mHz}=frequency expressed in megahertz.

$$\epsilon \cong \chi \tan b - 1 \qquad \text{Eq. 3}$$

ϵ=dielectric constant of the ground referred to air as unity.

(e) At sufficiently short distances (say less than 35 miles at broadcast frequencies), such that the curvature of the earth does not introduce an additional attenuation of the waves, the curves of Graph 20 may be used for determining the groundwave field strength of transmitting and receiving antennas at the surface of the earth for any radiated power, frequency, or set of ground constants in the following manner: First, lay off the straight inverse distance line corresponding to the power radiated on transparent log-log graph paper similar to that of Graph 20, labelling the ordinates of the chart in terms of field strength, and the abscissae in terms of distance. Next, by means of the formulas given on Graph 20, calculate the value of the numerical distance, *p*, at 1 mile, and the value of *b*. Then superimpose the log-log chart over Graph 20, shifting it vertically until the inverse distance lines on both charts coincide and shifting it horizontally until the numerical distance at 1 mile on Graph 20 coincides with 1 mile on the log-log graph paper. The curve of Graph 20 corresponding to the calculated value of *b* is then traced on the log-log graph paper giving the field strength versus distance in miles.

(f) This paragraph consists of the following Graphs 1 to 19, and 20.

NOTE: Graphs will not be published in the CFR. Copies are available by calling or writing the Consumer Affairs Office, Federal Communications Commission, Washington, DC 20554, Telephone: (202) 632-7000.

[28 FR 13574, Dec. 14, 1963, as amended at 50 FR 18823, May 2, 1985; 51 FR 45891, Dec. 23, 1986; 52 FR 36878, Oct. 1, 1987]

§ 73.185 Computation of interfering signal.

(a) Measured values of radiation are not to be used in calculating overlap, interference, and coverage.

(1) In the case of an antenna which is intended to be non-directional in the horizontal plane, an ideal non-directional radiation pattern shall be used in determining interference, overlap, and coverage, even if the antenna is not actually non-directional.

(2) In the case of an antenna which is directional in the horizontal plane, the radiation which shall be used in determining interference, overlap, and coverage is that calculated pursuant to § 73.150 or § 73.152, depending on

whether the station has a standard or modified standard pattern.

(3) In the case of calculation of interference or overlap to (not from) a foreign station, the notified radiation shall be used, even if the notified radiation differs from that in paragraphs (a) (1) or (2) of this section.

(b) For signals from stations operating on clear channels, skywave interference shall be determined from the appropriate formulas and Figures 1a (or 1b) and 6a contained in § 73.190.

(c) For signals from stations operating on regional and local channels, skywave interference is determined from the formulas and Figures 2 and 6a of § 73.190. (Certain simplifying assumptions may be made in the case of Class IV stations on local channels. See note to § 73.182(a)(4).

(d) The formulas in § 73.190(d) depicted in Figure 6a of § 73.190, entitled "Angles of Departure versus Transmission Range" are to be used in determining the angles in the vertical pattern of the antenna of an interfering station to be considered as pertinent to transmission by one reflection. To provide for variation in the pertinent vertical angle due to variations of ionosphere height and ionosphere scattering, the curves 4 and 5 indicate the upper and lower angles within which the radiated field is to be considered. The maximum value of field strength occurring between these angles shall be used to determine the multiplying factor to apply to the 10% skywave field intensity value determined from the formulas in § 73.190(b)(2), § 73.190(c)(2), or Figure 2 of § 73.190 as appropriate. The multiplying factor is found by dividing the maximum radiation between the pertinent angles by 100 mV/m. (Curves 4 and 5 include factors which represent the variation due to variation of the effective height of the E-layer and scattering.)

(e) Example of the use of skywave curves for stations operating on clear channels: Assume a Class II station with which interference may be expected is located at a distance of 724 kilometers from a proposed Class II station. The critical angles of radiation as determined from Figure 6a of § 73.190 are 9.6° and 16.3°. If the vertical pattern of the antenna of the proposed station, in the direction of the other station, is such that between the angles of 9.6° and 16.3° above the horizon the maximum radiation is 200 mV/m at one kilometer, the value of the 50% field, as read from Figure 1a of § 73.190, is multiplied by 2.6 to determine the interfering field intensity at the location in question. In order to obtain the value of the 10% field, this value is then increased by 8 dB. For calculations involving Class I-N stations, Figure 1b and 13dB are employed instead of Figure 1a and 8dB.

(f) For stations operating on regional and local channels, interfering skywave field intensities shall be determined in accordance with the procedure specified in (d) of this section and illustrated in (e) of this section, except that Figure 2 of § 73.190 is used in place of Figure 1a and 1b and the formulas of § 73.190. In using Figure 2 of § 73.190, one additional parameter must be considered, i.e., the variation of received field with the latitude of the path.

(g) Figure 2 of § 73.190, "10 percent Skywave Signal Range Chart," shows the signal as a function of the latitude of the transmission path, which is defined as the geographic latitude of the midpoint between the transmitter and receiver. When using Figure 2 of § 73.190, latitude 35° should be used in case the mid-point of the path lies below 35° North and latitude 50° should be used in case the mid-point of the path lies above 50° North.

(h) In the case of an antenna which is intended to be non-directional in the horizontal plane, the vertical distribution of the relative fields should be computed pursuant to § 73.160. In the case of an antenna which is directional in the horizontal plane, the vertical pattern in the great circle direction towards the point of reception in question must first be calculated. In cases where the radiation in the vertical plane, in the pertinent azimuth, contains a large lobe at a higher angle than the pertinent angle for one reflection, the method of calculating interference will not be restricted to that just described, but each such case will be considered on the basis of the best knowledge available.

(i) Example of the use of skywave curves for stations operating on regional and local channels: It is desired to determine the amount of interference to a Class III station at Portland, Oregon, caused by another Class III station at Los Angeles, California. The Los Angeles station is radiating a signal of 901 mV/m at 1 kilometer, in the horizontal plane, in the great circle direction of Portland, using a 0.5 wavelength antenna. The distance is 1328 kilometers. From Figure 6a of § 73.190, the upper and lower pertinent angles are 7° and 3.5° and, from Figure 5 of § 73.190, the maximum radiation within these angles is 99% of the horizontal radiation or 892 mV/m at one kilometer. The mid-point latitude of the transmission path is 39.8° N and, from Figure 2 of § 73.190, the 10% skywave field at 1328 kilometers is 0.050 mV/m for 100 mV/m radiated. Multiplying by 892/100 to adjust this value to the actual radiation gives 0.277 mV/m as to the interfering signal strength. At 20 to 1 ratio, the limitation to the Portland station is to the 5.5 mV/m contour.

(j) When the distance is large, more than one reflection may be involved and due consideration must be given each appropriate vector in the vertical pattern, as well as the constants of the earth where reflection takes place between the transmitting station and the service area to which interference may be caused.

(k) In performing calculations to determine permissible radiation from stations operating presunrise or postsunset in accordance with § 73.99, calculated diurnal factors will be multiplied with the values of skywave signals for such stations obtained from Figure 1a or Figure 2 of § 73.190.

(1) The diurnal factor is determined using the time of day at the mid-point of path between the site of the interfering station and the point at which interference is being calculated. Diurnal factors are computed using the formula $D_f = a + bF + cF^2 + dF^3$ where:

D_f represents the diurnal factor,
F is the frequency in MHz,
a,b,c, and d are constants obtained from the tables in paragraph (k)(2)

A diurnal factor greater than one will not be used in calculations and interpolation is to be used between calculated values where necessary. For reference purposes, curves for presunrise and postsunset diurnal factors are contained in Figures 13 and 14 of § 73.190.

(2) Constants used in calculating diurnal factors for the presunrise and postsunset periods are contained in paragraphs (k)(2) (i) and (ii) respectively. The columns labeled T_{mp} represents the number of hours before and after sunrise and sunset at the path midpoint.

(i) PRESUNRISE CONSTANTS

T_{mp}	a	b	c	d
−2	1.3084	.0083	−.0155	.0144
−1.75	1.3165	−.4919	.6011	−.1884
−1.5	1.0079	.0296	.1488	−.0452
−1.25	.7773	.3751	−.1911	.0736
−1	.6230	.1547	.2654	−.1006
−.75	.3718	.1178	.3632	−.1172
−.5	.2151	.0737	.4167	−.1413
−.25	.2027	−.2560	.7269	−.2577
SR	.1504	−.2325	.5374	−.1729
+.25	.1057	−.2092	.4148	−.1239
+.5	.0642	−.1295	.2583	−.0699
+.75	.0446	−.1002	.1754	−.0405
+1	.0148	.0135	.0462	.0010

(ii) POSTSUNSET CONSTANTS

T_{mp}	a	b	c	d
1.75	.9495	−.0187	.0720	−.0290
1.5	.7196	.3583	−.2280	.0611
1.25	.6756	.1518	.0279	−.0163
1.0	.5486	.1401	.0952	−.0288
.75	.3003	.4050	−.0961	.0256
.5	.1186	.4281	−.0799	.0197
.25	.0382	.3706	−.0673	.0171
SS	.0002	.3024	−.0540	.0086
−.25	.0278	.0458	.1473	−.0486
−.5	.0203	.0132	.1106	−.0340
−.75	.0152	−.0002	.0786	−.0185
−1.0	−.0043	.0452	−.0040	.0103
−1.25	.0010	.0135	.0103	.0047
−1.5	.0018	.0052	.0069	.0042
−1.75	−.0012	.0122	−.0076	.0076
−2.0	−.0024	.0141	−.0141	.0091

[30 FR 13783, Oct. 29, 1965, as amended at 33 FR 15420, Oct. 17, 1968; 46 FR 11995, Feb. 12, 1981; 48 FR 42958, Sept. 20, 1983; 50 FR 18843, May 2, 1985]

§ 73.186 Establishment of effective field at one kilometer.

(a) Section 73.189 provides that certain minimum field strengths are acceptable in lieu of the required minimum physical heights of the antennas proper. Also, in other situations, it may be necessary to determine the effective field. The following requirements shall govern the taking and submission of data on the field strength produced:

(1) Beginning as near to the antenna as possible without including the induction field and to provide for the fact that a broadcast antenna is not a point source of radiation (not less than one wave length or 5 times the vertical height in the case of a single element, i.e., nondirectional antenna or 10 times the spacing between the elements of a directional antenna), measurements shall be made on eight or more radials, at intervals of approximately 0.2 kilometer up to 3 kilometers (1.87 miles) from the antenna, at intervals of approximately 1 kilometer from 3 kilometers (1.87 miles) to 10 kilometers (6.2 miles) from the antenna, at intervals of approximately 3 kilometers from 10 kilometers (6.2 miles) to 25 or 34 kilometers (15.5 miles or 20 miles) from the antenna, and a few additional measurements if needed at greater distances from the antenna. Where the antenna is rurally located and unobstructed measurements can be made, there shall be as many as 18 measurements on each radial. However, where the antenna is located in a city where unobstructed measurements are difficult to make, measurements shall be made on each radial at as many unobstructed locations as possible, even though the intervals are considerably less than stated above, particularly within 3 kilometers of the antenna. In cases where it is not possible to obtain accurate measurements at the closer distances (even out to 8 or 10 kilometers due to the character of the intervening terrain), the measurements at greater distances should be made at closer intervals. (It is suggested that "wave tilt" measurements may be made to determine and compare locations for taking field strength measurements, particularly to determine that there are no abrupt changes in ground conductivity or that reflected waves are not causing abnormal strengths.

(2) The data required by paragraph (a)(1) of this section should be plotted for each radial in accordance with either of the two methods set forth below:

(i) Using log-log coordinate paper, plot field strengths as ordinate and distance as abscissa.

(ii) Using semi-log coordinate paper, plot field strength times distance a ordinate on the log scale and distance as abscissa on the linear scale.

(3) However, regardless of which o the methods in paragraph (a)(2) o this section is employed, the prope curve to be drawn through the points plotted shall be determined by com parison with the curves in § 73.184 a follows: Place the sheet on which th actual points have been plotted ove the appropriate Graph in § 73.184 hold to the light if necessary an adjust until the curve most closely matching the points is found. Thi curve should then be drawn on th sheet on which the points were plot ted, together with the inverse distanc curve corresponding to that curv The field at 1 kilometer for the radi concerned shall be the ordinate on th inverse distance curve at 1 kilometer.

(4) When all radials have been ana lyzed in accordance with paragrap (a)(3) of this section, a curve shall b plotted on polar coordinate pape from the fields obtained, which give the inverse distance field pattern at kilometer. The radius of a circle, th area of which is equal to the are bounded by this pattern, is the effe tive field. (See § 73.14.)

(5) The antenna power of the statio shall be maintained at the authorize level during all field measurement The power determination will be mad using the direct method as describe in § 73.51(a) with instruments of a ceptable accuracy specified § 73.1215.

(b) Complete data taken in conjun tion with the field strength measur ments shall be submitted to the Com mission in affidavit form including th following:

(1) Tabulation by number of eac point of measurement to agree wi the map required in paragraph (b)(of this section, the date and time each measurement, the field streng

(E), the distance from the antenna (D) and the product of the field strength and distance (ED) (if data for each radial are plotted on semilogarithmic paper, see above) for each point of measurement.

(2) Map showing each point of measurement numbered to agree with tabulation required above.

(3) Description of method used to take field strength measurements.

(4) The family of theoretical curves used in determining the curve for each radial properly identified by conductivity and dielectric constants.

(5) The curves drawn for each radial and the field strength pattern.

(6) The antenna resistance at the operating frequency.

(7) Antenna current or currents maintained during field strength measurements.

[28 FR 13574, Dec. 14, 1963, as amended at 41 FR 44178, Oct. 7, 1976; 46 FR 11995, Feb. 12, 1981; 49 FR 49851, Dec. 24, 1984; 50 FR 18843, May 2, 1985; 50 FR 47055, Nov. 14, 1985; 51 FR 2707, Jan. 21, 1986; 52 FR 10570, Apr. 2, 1987]

§ 73.187 Limitation on daytime radiation.

(a)(1) Except as otherwise provided in paragraphs (a) (2) and (3) of this section, no authorization will be granted for Class II facilities if the proposed facilities would radiate during the period of critical hours (the two hours after local sunrise and the two hours before local sunset) toward any point on the 0.1 mV/m contour of a co-channel U.S. Class I-A or I-B station, at or below the pertinent vertical angle determined from Curve 4 of Figure 6a of § 73.190, values in excess of those obtained as provided in paragraph (b) of this section.

(2) The limitation set forth in paragraph (a)(1) of this section shall not apply in the following cases:

(i) Any Class II facilities authorized before November 30, 1959; or

(ii) For Class II stations authorized before November 30, 1959, subsequent changes of facilities which do not involve a change in frequency, an increase in radiation toward any point on the 0.1 mV/m contour of a co-channel U.S. Class I-A or I-B station, or the move of transmitter site materially closer to the 0.1 mV/m contour of such Class I-A or I-B station.

(3) If a Class II station authorized before November 30, 1959, is authorized to increase its daytime radiation in any direction toward the 0.1 mV/m contour of a co-channel Class I-A or I-B station (without a change in frequency or a move of transmitter site materially closer to such contour), it may not during the two hours after local sunrise or the two hours before local sunset, radiate in such directions a value exceeding the higher of:

(i) The value radiated in such directions with facilities last authorized before November 30, 1959, or

(ii) The limitation specified in paragraph (a)(i) of this section.

(b) To obtain the maximum permissible radiation for a Class II station on a given frequency (fkHz) from 640 kHz through 990 kHz, multiply the radiation value obtained for the given distance and azimuth from the 500 kHz chart (Figure 9 of § 73.190) by the appropriate interpolation factor shown in the K_{500} column of paragraph (c) of this section; and multiply the radiation value obtained for the given distance and azimuth from the 1000 kHz chart (Figure 10 of § 73.190) by the appropriate interpolation factor shown in the K_{1000} column of paragraph (c) of this section. Add the two products thus obtained; the result is the maximum radiation value applicable to the Class II station in the pertinent directions. For frequencies from 1010 kHz to 1580 kHz, obtain in a similar manner the proper radiation values from the 1000 kHz and 1600 kHz charts (Figures 10 and 11 of § 73.190), multiply each of these values by the appropriate interpolation factors in the K'_{1000} and K'_{1600} columns in paragraph (c) of this section, and add the products.

(c) *Interpolation factors.* (1) Frequencies below 1000 kHz.

fkHz	K_{500}	K_{1000}
640	0.720	0.280
650	0.700	0.300
660	0.680	0.320
670	0.660	0.340
680	0.640	0.360
690	0.620	0.380
700	0.600	0.400

fkHz	K_{500}	K_{1000}
710	0.580	0.420
720	0.560	0.440
730	0.540	0.460
740	0.520	0.480
750	0.500	0.500
760	0.480	0.520
770	0.460	0.540
780	0.440	0.560
800	0.400	0.600
810	0.380	0.620
820	0.360	0.640
830	0.340	0.660
840	0.320	0.680
850	0.300	0.700
860	0.280	0.720
870	0.260	0.740
880	0.240	0.760
890	0.220	0.780
900	0.200	0.800
940	0.120	0.880
990	0.020	0.980

(2) Frequencies above 1000 kHz.

f'kHz	K'_{1000}	K'_{1600}
1010	0.983	0.017
1020	0.967	0.033
1030	0.950	0.050
1040	0.933	0.067
1050	0.917	0.083
1060	0.900	0.100
1070	0.883	0.117
1080	0.867	0.133
1090	0.850	0.150
1100	0.833	0.167
1110	0.817	0.183
1120	0.800	0.200
1130	0.783	0.217
1140	0.767	0.233
1160	0.733	0.267
1170	0.717	0.283
1180	0.700	0.300
1190	0.683	0.317
1200	0.667	0.333
1210	0.650	0.350
1220	0.633	0.367
1500	0.167	0.833
1510	0.150	0.850
1520	0.133	0.867
1530	0.117	0.883
1540	0.100	0.900
1550	0.083	0.917
1560	0.067	0.933
1570	0.050	0.950
1580	0.033	0.967

[28 FR 13574, Dec. 14, 1963, as amended at 49 FR 43962, Nov. 1, 1984]

§ 73.189 Minimum antenna heights or field strength requirements.

(a) Section 73.45 requires that all applicants for new, additional, or different broadcast facilities and all licensees requesting authority to move the transmitter of an existing station, shall specify a radiating system, the efficiency of which complies with the requirements of good engineering practice for the class and power of the station.

(b) The specifications deemed necessary to meet the requirements of good engineering practice at the present state of the art are set out in detail below.

(1) The licensee of a AM broadcast station requesting a change in power, time of operation, frequency, or transmitter location must also request authority to install a new antenna system or to make changes in the existing antenna system which will meet the minimum height requirements, or submit evidence that the present antenna system meets the minimum requirements with respect to field strength, before favorable consideration will be given thereto. (See § 73.186.) In the event it is proposed to make substantial changes in an existing antenna system, the changes shall be such as to meet the minimum height requirements or will be permitted subject to the submission of field strength measurements showing that it meets the minimum requirements with respect to effective field strength.

(2) These minimum actual physical vertical heights of antennas permitted to be installed are shown by curves A, B, and C of Figure 7 of § 73.190 as follows:

(i) Class IV stations, and stations in Alaska, Hawaii, Puerto Rico and the U.S. Virgin Islands on 1230, 1240, 1340, 1400, 1450 and 1490 kHz that were formerly Class IV and were redesignated as Class III pursuant to § 73.26(b), 4 meters or a minimum effective field strength of 241 mV/m for 1 kW (12 mV/m for 0.25 kW). (This height applies to a Class IV station on a local channel only. Curve A shall apply to any Class IV stations in the 48 conterminous states that are assigned to Regional channels.)

(ii) Class I-N and Class II stations and Class III stations other than those covered in § 73.189(b)(2)(i), a minimum effective field strength of 282 mV/m for 1 kW.

(iii) Class I-A, and I-B stations, a minimum effective field strength of 362 mV/m for 1 kW.

(3) The heights given on the graph for the antenna apply regardless of whether the antenna is located on the ground or on a building. Except for the reduction of shadows, locating the antenna on a building does not necessarily increase the efficiency and where the height of the building is in the order of a quarter wave the efficiency may be materially reduced.

(4) At the present development of the art, it is considered that where a vertical radiator is employed with its base on the ground, the ground system should consist of buried radial wires at least one-fourth wave length long. There should be as many of these radials evenly spaced as practicable and in no event less than 90. (120 radials of 0.35 to 0.4 of a wave length in length and spaced 3° is considered an excellent ground system and in case of high base voltage, a base screen of suitable dimensions should be employed.)

(5) In case it is contended that the required antenna efficiency can be obtained with an antenna of height or ground system less than the minimum specified, a complete field strength survey must be supplied to the Commission showing that the field strength at a mile without absorption fulfills the minimum requirements. (See § 73.186.) This field survey must be made by a qualified engineer using equipment of acceptable accuracy.

(6) The main element or elements of a directional antenna system shall meet the above minimum requirements with respect to height or effective field strength. No directional antenna system will be approved which is so designed that the effective field of the array is less than the minimum prescribed for the class of station concerned, or in case of a Class I station less than 90 percent of the ground wave field which would be obtained from a perfect antenna of the height specified by Figure 7 of § 73.190 for operation on frequencies below 1000 kHz, and in the case of a Class II or III station less than 90 percent of the ground wave field which would be obtained from a perfect antenna of the height specified by Figure 7 of § 73.190 for operation on frequencies below 750 kHz.

[28 FR 13574, Dec. 14, 1963, as amended at 31 FR 8069, June 8, 1966; 33 FR 15420, Oct. 17, 1968; 44 FR 36038, June 20, 1979; 50 FR 18844, May 2, 1985; 51 FR 2707, Jan. 21, 1986; 51 FR 4753, Feb. 7, 1986; 52 FR 10570, Apr. 2, 1987]

§ 73.190 Engineering charts and related formulas.

(a) This section consists of the following Figures: 1a, 1b, 2, r3, 5, 6a, 7, 8, 9, 10, 11, 12, and 13. Additionally, formulas that are directly related to graphs are included.

(b) Figure 1a depicts 50% field strength values [F(50)].

(1) For distances greater than 4250 kilometers, the following formula may be used to compute 50% field strength values:

$$F_c = \text{antilog}\left[\frac{\dfrac{231}{3 + d/1000} - 35.5}{20}\right] \quad \mu V/m$$

where:

F=50% skywave field strength values [F(50)]

d^c=path distance in kilometers

(2) 10% field strength values [F(10)] are derived from Figure 1a by the following formula:

F(10)=F(50) + 8 dB. dB(1mV/m)

(3) The field strength value in Figure 1a at 100 km also is to be used for distances less than 100 km. However, the actual great-circle distance is to be used in determining angle of departure.

(c) Figure 1b depicts 50% field strength values F(50) for calculations involving Alaskan stations.

(1) The following formula also may be used for computing field strength values for such applications:

$F_c = 95 - 20\ \log_d - 20\ ((d+300)/1000)$ ½ dB(1 uV/m)

where:

F = 50% skywave filed strength values F(in dB (1 uV/m)

d^r = path distance in kilometers

(2) 10% field strength values F(1 are derived from Figure 1b from th following formula:

F(10) = F(50) + 13 dB microvolts per meter

(d) Figure 6a depicts angles of depa ture versus transmission range. The angles may also be computed using th following formulas:

$$\theta^{\circ} = \tan^{-1}\left(k_n \ \cot \frac{d}{444.54}\right) - \frac{d}{444.54}$$

Where:

d = distance in kilometers

n = 1 for 50% field strength values

n = 2 or 3 for 10% field strength values

and where

$K_1 = 0.00752$

$K_2 = 0.00938$

$K_3 = 0.00565$

NOTE: Computations using these formu should not be carried beyond 0.1 degree.

(e) In the event of disagreement b tween computed values using the fo mulas shown above and values ob tained directly from the figures, th computed values will control.

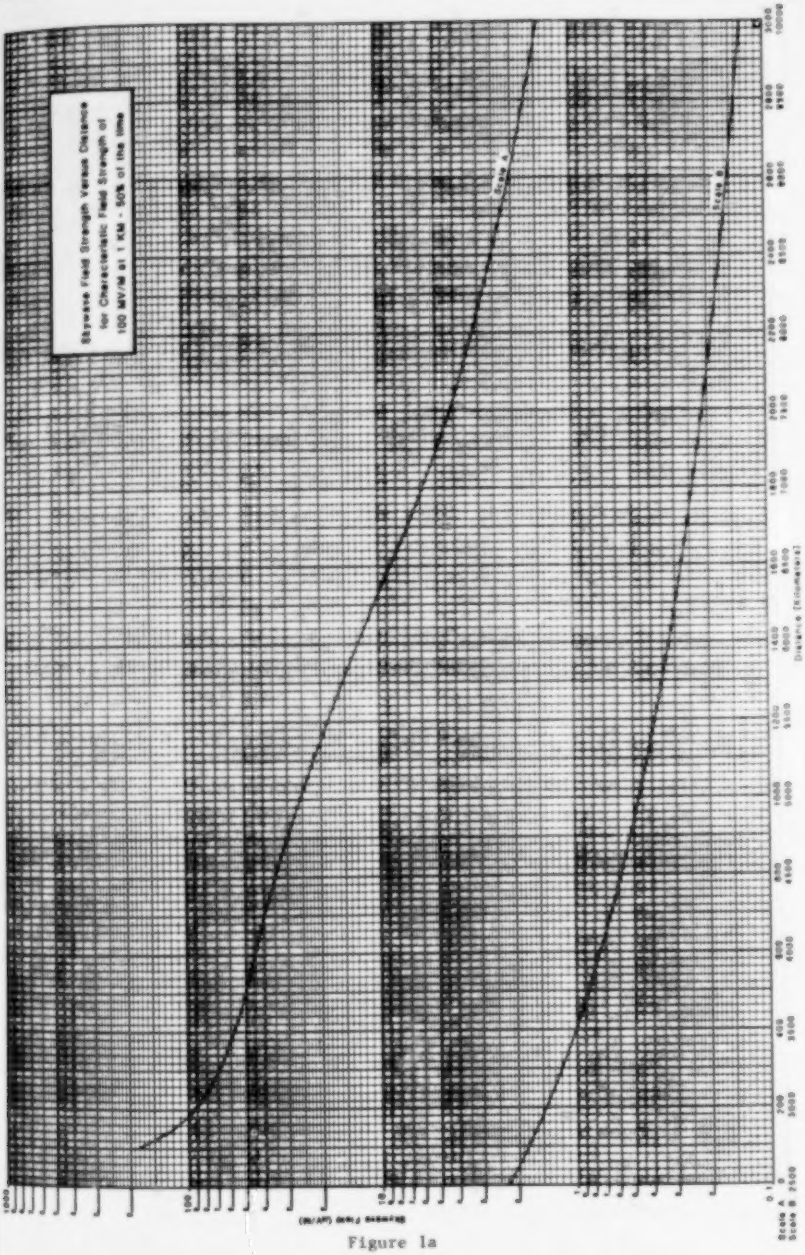

Skywave Field Strength Versus Distance for Characteristic Field Strength of 100 MV/M at 1 KM - 50% of the time
Scale A
Scale B
1000
100
10
1
Field Strength (uV/m)
0
2500
200
3000
400
3500
600
4000
800
4500
1000
5000
1200
5500
1400
6000
1600
6500
1800
7000
2000
7500
2200
8000
2400
8500
2600
9000
2800
9500
3000
10000
Distance (Kilometers)
Scale A
Scale B

Figure 1a

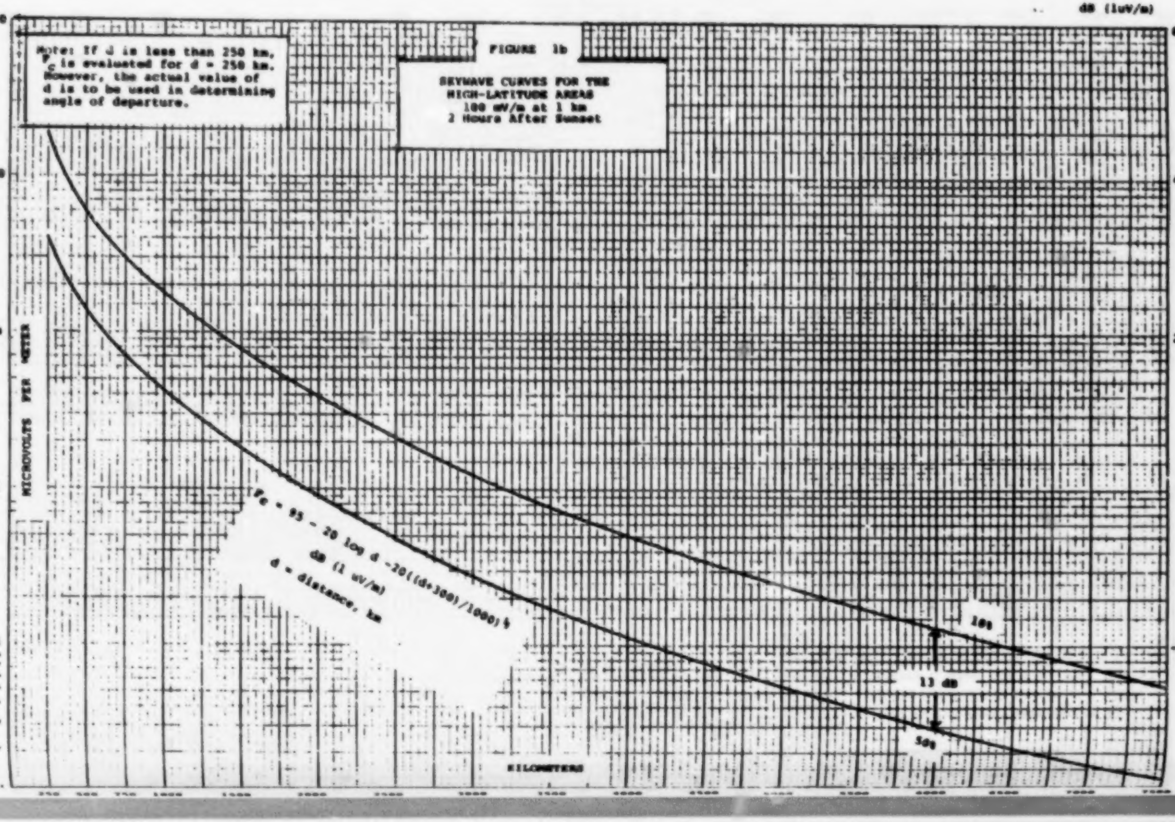


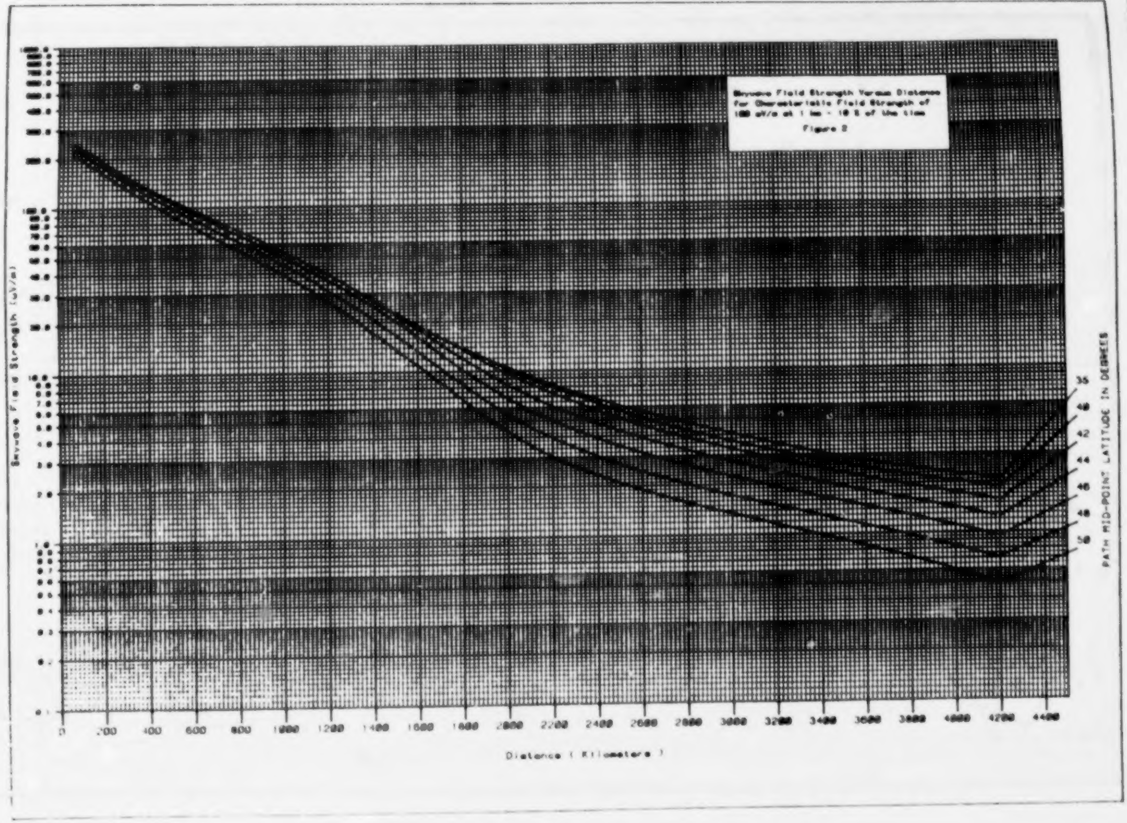
FIGURE 1b

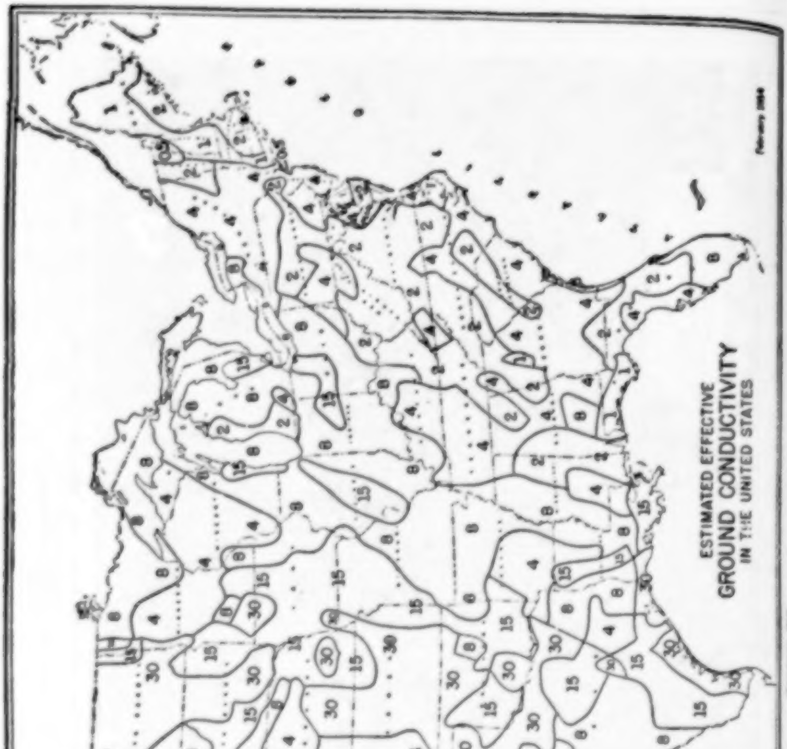
SKYWAVE CURVES FOR THE
HIGH-LATITUDE AREAS
100 mV/m at 1 km
2 Hours After Sunset

Note: If d is less than 250 km, F_c is evaluated for d = 250 km. However, the actual value of d is to be used in determining angle of departure.

$F_c = 95 - 20 \log d - 20((d+300)/1000)^{\frac{1}{2}}$ dB (1 uV/m)

d = distance, km


Skywave Field Strength Versus Distance
for Characteristic Field Strength of
100 mV/m at 1 km - 10 % of the time
Figure 2
Skywave Field Strength (uV/m)
Distance (Kilometers)
PATH MID-POINT LATITUDE IN DEGREES
35
40
42
44
46
48
50
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
2600
2800
3000
3200
3400
3600
3800
4000
4200
4400
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
90.0
100.0
200.0
300.0
400.0
500.0
600.0
700.0
800.0
900.0
1000.0


ESTIMATED EFFECTIVE
GROUND CONDUCTIVITY
IN THE UNITED STATES
NUMBERS ON MAP REPRESENT ESTIMATED EFFECTIVE GROUND CONDUCTIVITY IN MILLIMHOS PER METER
CONDUCTIVITY OF SEAWATER IS NOT SHOWN ON MAP BUT IS ASSUMED TO BE 5000 MILLIMHOS PER METER
February 1954

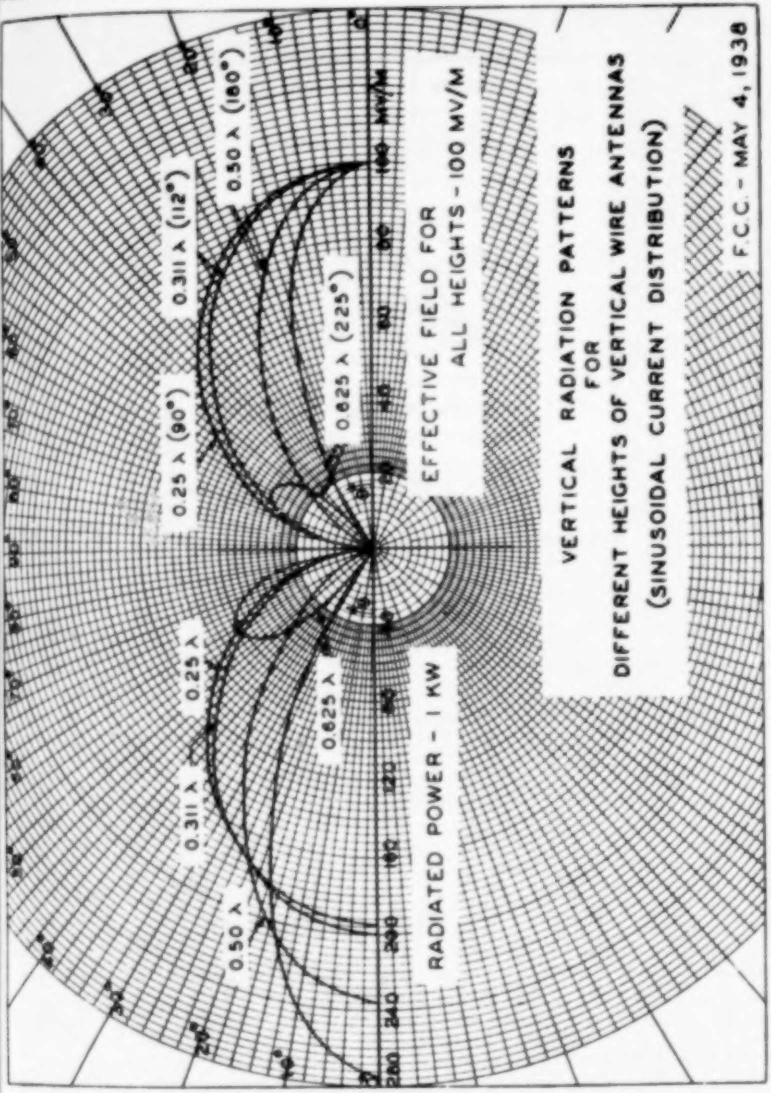
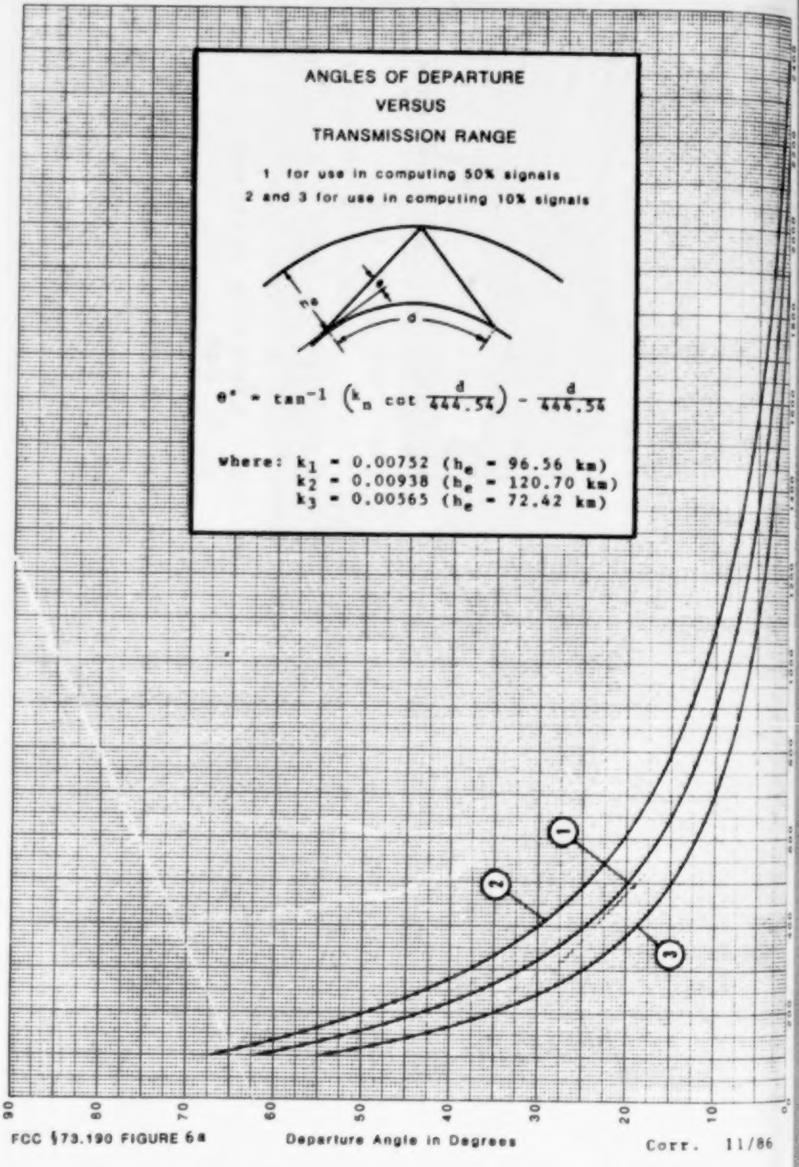

VERTICAL RADIATION PATTERNS
FOR
DIFFERENT HEIGHTS OF VERTICAL WIRE ANTENNAS
(SINUSOIDAL CURRENT DISTRIBUTION)
F.C.C. - MAY 4, 1938
EFFECTIVE FIELD FOR
ALL HEIGHTS - 100 MV/M
RADIATED POWER - 1 KW
0.25 λ (90°)
0.311 λ (112°)
0.50 λ (180°)
0.625 λ (225°)
0.25 λ
0.311 λ
0.50 λ
0.625 λ
MV/M

Figure 5



$$\theta^\circ = \tan^{-1}\left(k_n \cot \frac{d}{444.54}\right) - \frac{d}{444.54}$$

where: $k_1 = 0.00752$ ($h_e = 96.56$ km)
$k_2 = 0.00938$ ($h_e = 120.70$ km)
$k_3 = 0.00565$ ($h_e = 72.42$ km)

FCC §73.190 FIGURE 6a Departure Angle in Degrees Corr. 11/86

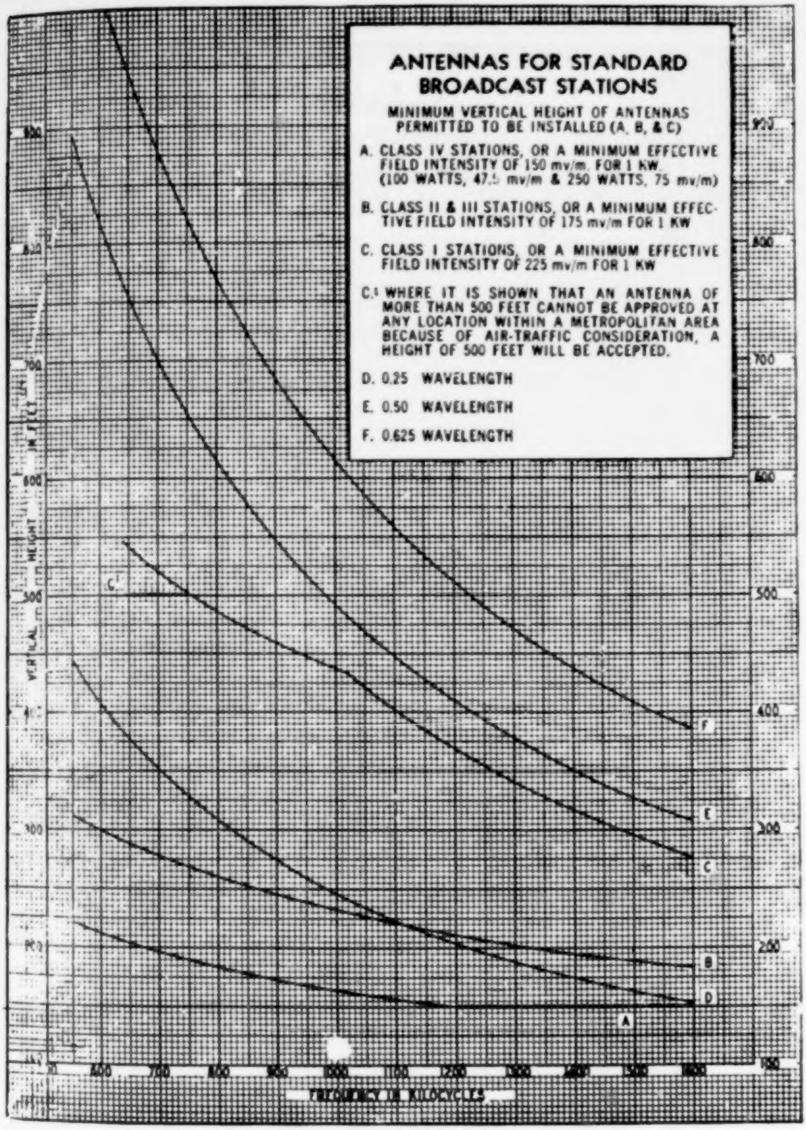

ANTENNAS FOR STANDARD BROADCAST STATIONS
MINIMUM VERTICAL HEIGHT OF ANTENNAS PERMITTED TO BE INSTALLED (A, B, & C)
A. CLASS IV STATIONS, OR A MINIMUM EFFECTIVE FIELD INTENSITY OF 150 mv/m. FOR 1 KW. (100 WATTS, 47.5 mv/m & 250 WATTS, 75 mv/m)
B. CLASS II & III STATIONS, OR A MINIMUM EFFECTIVE FIELD INTENSITY OF 175 mv/m FOR 1 KW
C. CLASS I STATIONS, OR A MINIMUM EFFECTIVE FIELD INTENSITY OF 225 mv/m FOR 1 KW
C.¹ WHERE IT IS SHOWN THAT AN ANTENNA OF MORE THAN 500 FEET CANNOT BE APPROVED AT ANY LOCATION WITHIN A METROPOLITAN AREA BECAUSE OF AIR-TRAFFIC CONSIDERATION, A HEIGHT OF 500 FEET WILL BE ACCEPTED.
D. 0.25 WAVELENGTH
E. 0.50 WAVELENGTH
F. 0.625 WAVELENGTH
VERTICAL HEIGHT IN FEET
900
800
700
600
500
400
300
200
150
C¹
F
E
C
B
D
A
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
FREQUENCY IN KILOCYCLES

Figure 7

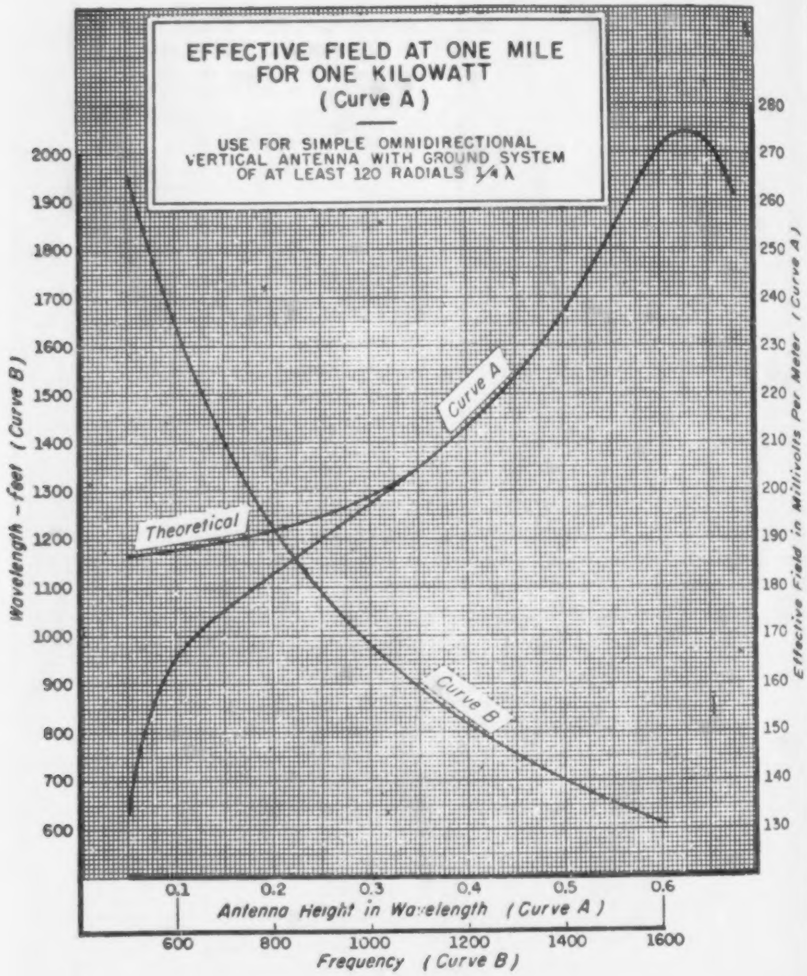

EFFECTIVE FIELD AT ONE MILE
FOR ONE KILOWATT
(Curve A)
USE FOR SIMPLE OMNIDIRECTIONAL
VERTICAL ANTENNA WITH GROUND SYSTEM
OF AT LEAST 120 RADIALS 1/4 λ
Theoretical
Curve A
Curve B
Wavelength - feet (Curve B)
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
Effective Field in Millivolts Per Meter (Curve A)
280
270
260
250
240
230
220
210
200
190
180
170
160
150
140
130
0.1
0.2
0.3
0.4
0.5
0.6
Antenna Height in Wavelength (Curve A)
600
800
1000
1200
1400
1600
Frequency (Curve B)

Figure 8

PERMISSIBLE DAYTIME RADIATION
FOR CLASS II STATIONS

500 KC

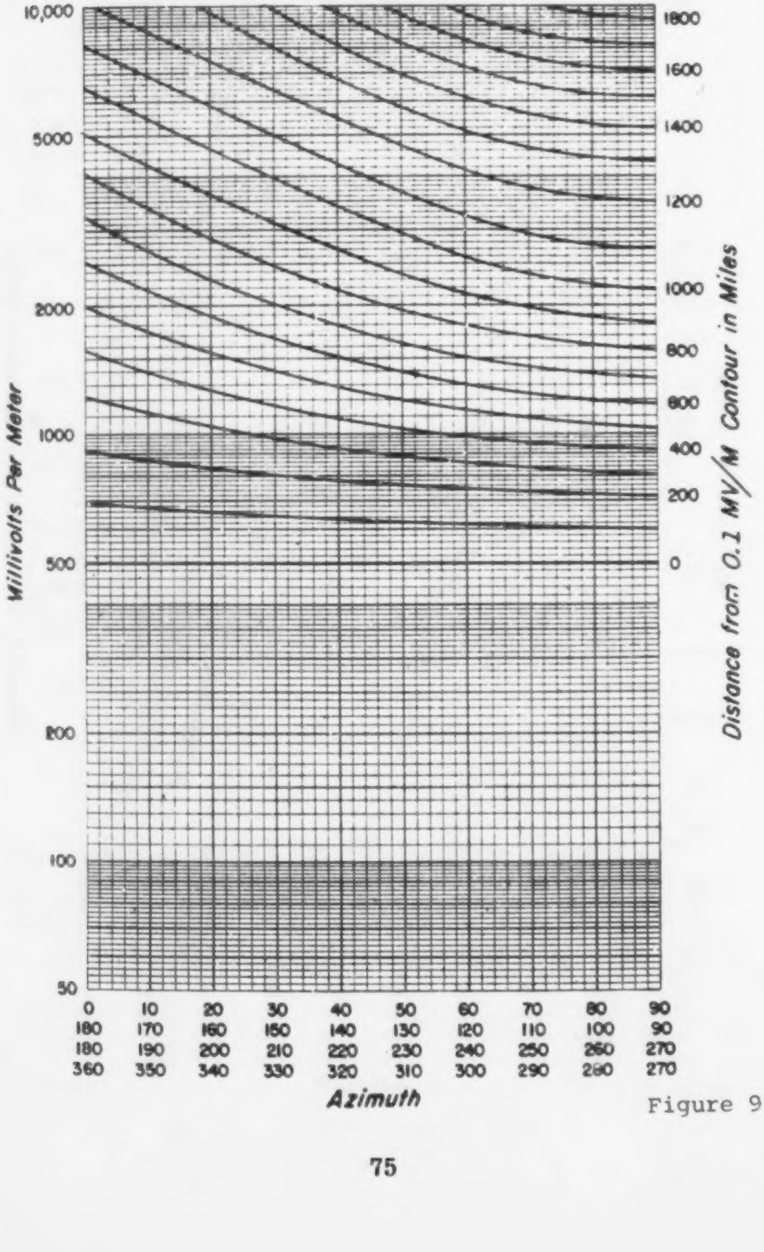


Figure 9

PERMISSIBLE DAYTIME RADIATION
FOR CLASS II STATIONS
1000 KC

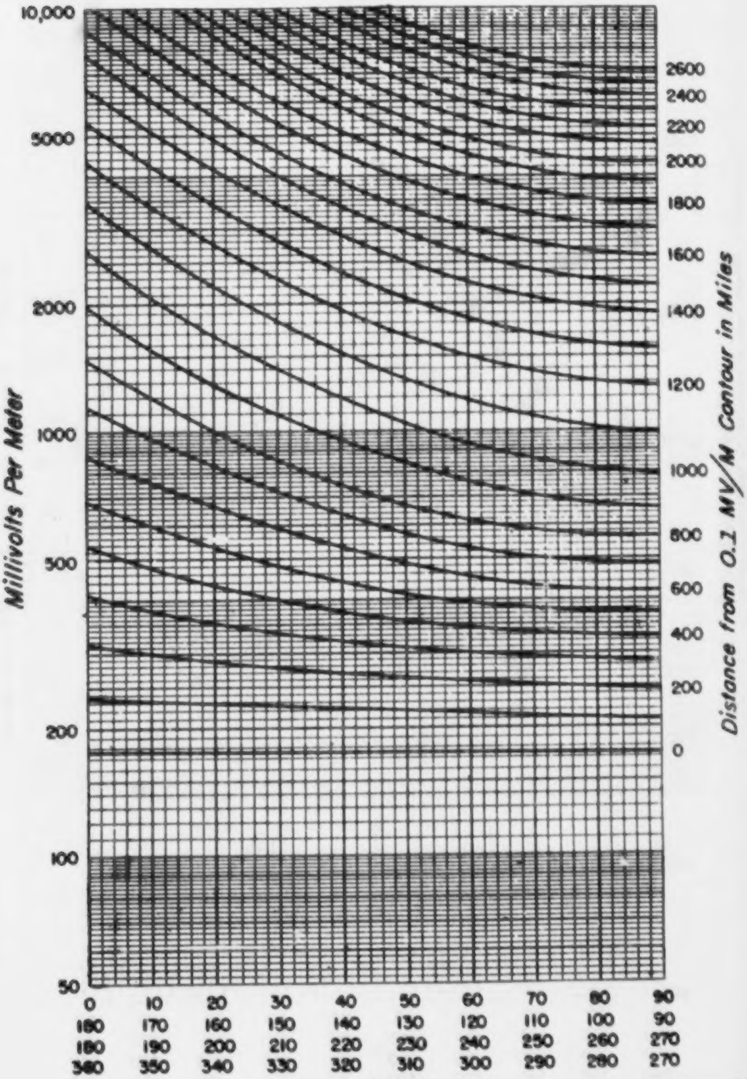


Figure 1

PERMISSIBLE DAYTIME RADIATION
FOR CLASS II STATIONS
1600 KC

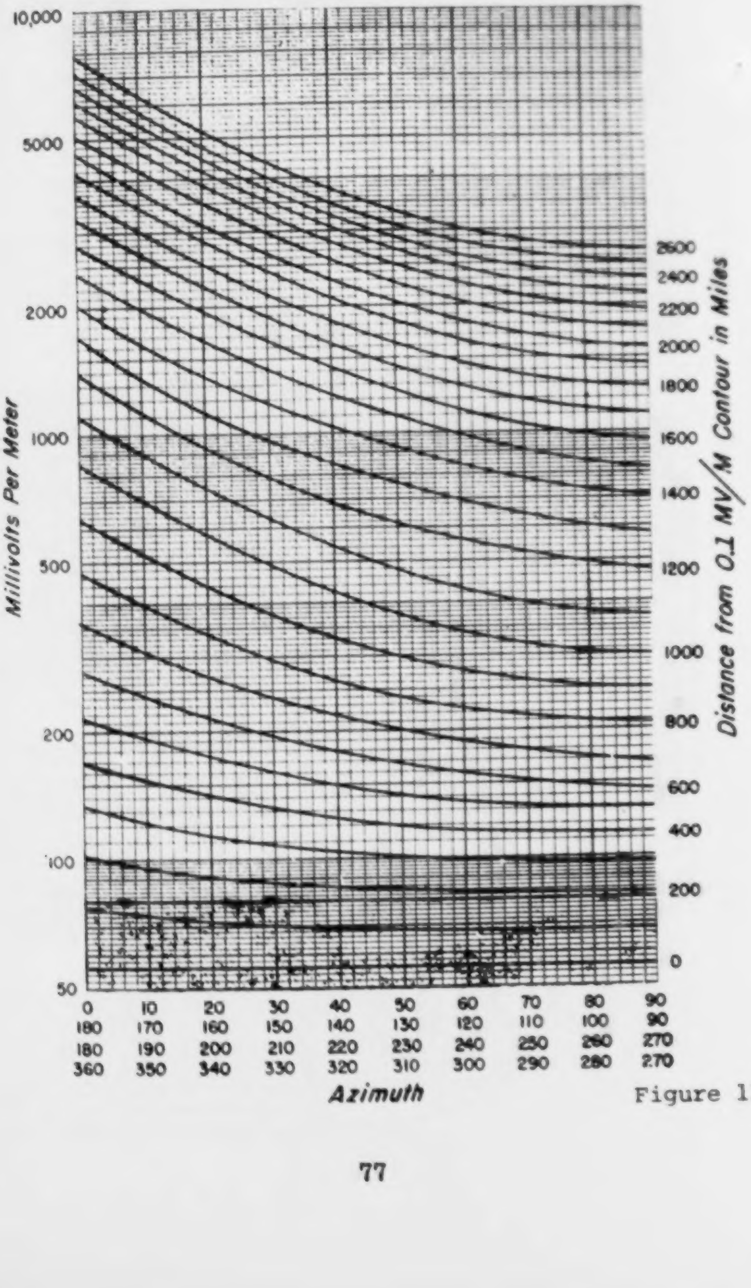
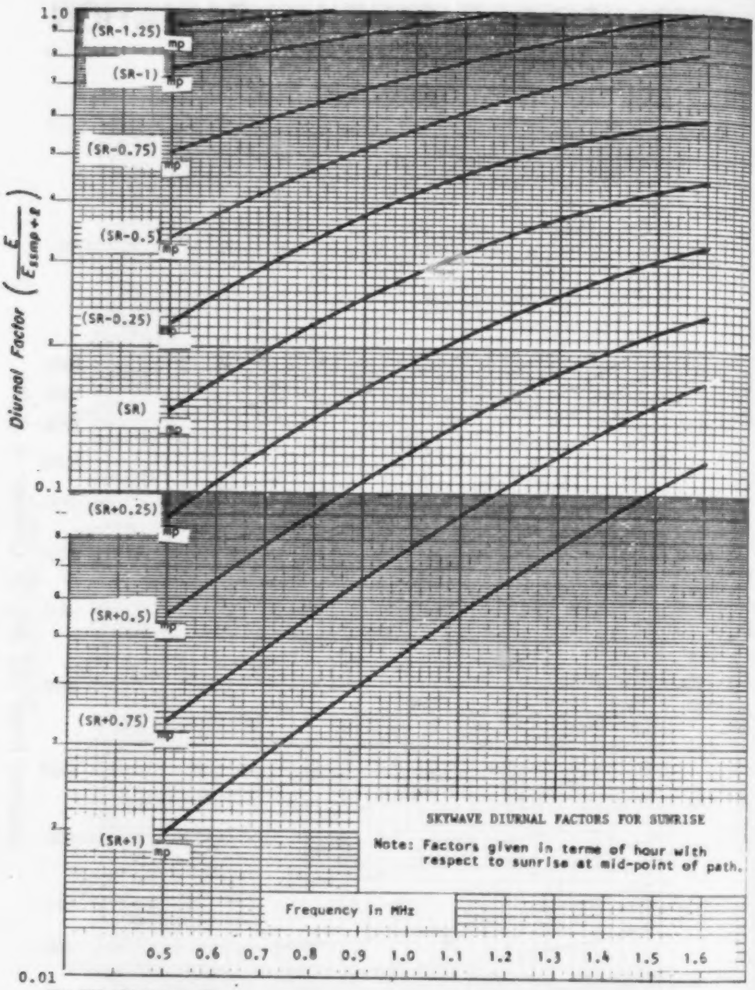
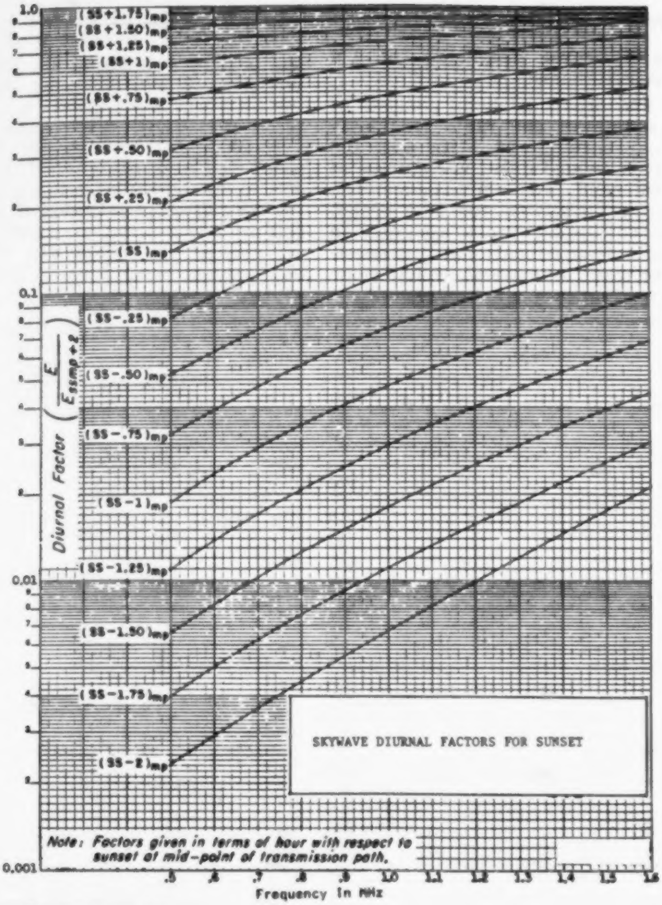


Figure 11



FCC §73.190 Figure 12



FCC §73.190 Figure 13

[28 FR 13574, Dec. 14, 1963, as amended at 30 FR 12720, Oct. 6, 1965; 33 FR 15420, Oct 17, 1968; 48 FR 42959, Sept. 20, 1983; 49 FR 43963, Nov. 1, 1984; 50 FR 18844, May 2, 1985; 51 FR 4753, Feb. 7, 1986; 52 FR 36879, Oct. 1, 1987]

Subpart B—FM Broadcast Stations

§ 73.201 Numerical designation of FM broadcast channels.

The FM broadcast band consists of that portion of the radio frequency spectrum between 88 MHz and 108 MHz. It is divided into 100 channels of 200 kHz each. For convenience, the frequencies available for FM broadcasting (including those assigned to noncommercial educational broadcasting) are given numerical designations which are shown in the table below:

Frequency (Mc/s)	Channel No.
88.1	201
88.3	202
88.5	203
88.7	204
88.9	205
89.1	206
89.3	207
89.5	208
89.7	209
89.9	210
90.1	211
90.3	212
90.5	213
90.7	214
90.9	215
91.1	216
91.3	217
91.5	218
91.7	219
91.9	220
92.1	221
92.3	222
92.5	223
92.7	224
92.9	225
93.1	226
93.3	227
93.5	228
93.7	229
93.9	230
94.1	231
94.3	232
94.5	233
94.7	234
94.9	235
95.1	236
95.3	237
95.5	238
95.7	239
95.9	240
96.1	241
96.3	242
96.5	243
96.7	244
96.9	245
97.1	246
97.3	247
97.5	248
97.7	249
97.9	250
98.1	251
98.3	252
98.5	253
98.7	254
98.9	255
99.1	256
99.3	257
99.5	258
99.7	259
99.9	260
100.1	261
100.3	262
100.5	263
100.7	264
100.9	265
101.1	266
101.3	267
101.5	268
101.7	269
101.9	270
102.1	271
102.3	272
102.5	273
102.7	274
102.9	275
103.1	276
103.3	277
103.5	278
103.7	279
103.9	280
104.1	281
104.3	282
104.5	283
104.7	284
104.9	285
105.1	286
105.3	287
105.5	288
105.7	289
105.9	290
106.1	291
106.3	292
106.5	293
106.7	294
106.9	295
107.1	296
107.3	297
107.5	298
107.7	299
107.9	300

NOTE: The frequency 108.0 MHz may be assigned to VOR test stations subject to the condition that interference is not caused to the reception of FM broadcasting stations, present or future.

[28 FR 13623, Dec. 14, 1963, as amended at 30 FR 4480, Apr. 7, 1965; 52 FR 10570, Apr. 2, 1987]

§ 73.202 Table of Allotments.

(a) *General.* The following Table of Allotments contains the channels (other than noncommercial educational Channels 201-220) designated for use in communities in the United States, its territories, and possessions. All listed channels are for Class B stations in Zones I and I-A and for Class

C stations in Zone II unless otherwise specifically designated.

(1) Channels designated with an asterisk may be used only by noncommercial educational broadcast stations. The rules governing the use of those channels are contained in § 73.501.

(2) Each channel listed in the Table of Allotments reflects the class of station that is authorized, or has an application filed, to use it based on the minimum and maximum facility requirements for each class contained in § 73.211.

NOTE: The provisions of this paragraph [(a)(2) of this section] become effective [3 years from the effective date of the Report and Order in BC Docket 80-90].

(b) *Table of FM Allotments.*

ALABAMA

	Channel No
Abbeville	232A
Albertville	286C
Alexander City	291C1
Andalusia	251C1, 279A
Anniston	263C
Arab	224A
Ashland	237A
Athens	282C
Atmore	281C, 290A
Attalla	275A
Auburn	249A
Bay Minette	288A, 293A
Birmingham	229C, 233C, 243C, 258C, 284C, 295C, 299C
Brantley	282A
Brewton	292A
Brundidge	234A
Butler	228A
Camden	272A
Carrollton	231C
Centre	290A
Chatom	291C3
Chickasaw	252C2
Citronelle	271C3
Clanton	249A
Cordova	237A
Cullman	221A, 266C
Dadeville	247A
Decatur	245C, 271C1
Demopolis	293C2
Dothan	238C, 259C1, 267A, 273A
Elba	266A
Enterprise	245C, 294C
Eufaula	224A, 250A
Eutaw	282A
Evergreen	227C2
Fairhope	221C3
Fayette	251C1
Florence	241A, 297C
Fort Mitchell	252A
Fort Rucker	263A
Fruithurst	274A
Gadsden	279C
Geneva	229C1
Georgiana	299A
Glencoe	226A
Greenville	232A, 240A
Guntersville	240A
Haleyville	224A
Hamilton	221A
Hartselle	291A
Holly Pond	238A
Homewood	247A
Huntsville	236C2, 256C
Jackson	233C3
Jasper	273C
Linden	275C2, 253C1
Marion	248A
Meridianville	231A
Millbrook	246A
Mobile	225C, 235C, 241C, 248C, 260C
Monroeville	257C2
Montgomery	222C, 241A, 255C, 270C, 277C
Moulton	276A
Muscle Shoals	288A
Northport	264A
Oneonta	249A
Opelika	244A
Opp	272A
Orange Beach	289A
Oxford	250A
Ozark	280A, 285A
Phenix City	261A
Prattville	236C2
Reform	269C2
Roanoke	272C3
Rogersville	230A
Russellville	249A
Scottsboro	252A
Selma	261C2, 265C2, 287C2
Sheffield	292C2
Stevenson	269A
Sylacauga	252A
Talladega	224A, 248A
Thomasville	237A
Trinity	223A
Troy	289C
Trussville	290A
Tuscaloosa	225C2, 239C1, 288A
Tuscumbia	262C
Tuskegee	240A, 260A
Union Springs	231A
Uniontown	298A
Valley	251A
Vernon	293A
Warrior	254A
Winfield	290A
York	285C2

EFFFECTIVE DATE NOTE 1: At 55 FR 34263, August 22, 1990, Citronelle was amended by removing Channel 270A and adding Channel 271C3, effective October 11, 1990.

EFFFECTIVE DATE NOTE 2: At 55 FR 36823, September 7, 1990, Fairhope was amended by removing Channel 221A and adding Channel 221C3, effective October 19, 1990.

ALASKA

	Channel No.
Anchorage	225C, 247C1, 251C1, 255C1, 263C2, 267C, 271C, 275C2, 281C1, 287C1, 293C, 298C
Bethel	261C3, 252C3
College	280C3
Cordova	265A
Delta Junction	228A
Fairbanks	240C3, 251C1, 266C2, 273C1, 284C2
Haines	*272A
Homer	278C
Houston	232A
Juneau	264C2, 274C, 282A, 286C2, 292C3
Kenai	261C3
Ketchikan	290C2, 294C2
Kodiak	261A, 266C2
Kotzebue	280A
Naknek	265A
Nome	262A
North Pole	262C1
Palmer	239C1
Petersburg	*265A
Seward	276A
Sitka	276C2, 284C2
Soldotna	243C, 269C3
Wasilla	259C1
Wrangell	*269A
Yakutat	280A

ARIZONA

	Channel No
Ajo	252A
Apache junction	296C2
Arizona city	292A
Benson	249A
Bisbee	221A
Buckeye	295A
Bullhead City	274C
Casa Grande	288C2
Chandler	300C
Chinle	297A
Claypool	291A
Clifton	271C
Colorado City	296C1
Comobabi	*276A
Coolidge	280A
Cottonwood	240A, 289A
Douglas	237A, 243A
Eager	223C
Flagstaff	225C, 230C, 248C, 261C2
Glendale	222C, 278C
Globe	247A, 262C
Green Valley	221A, 246A
Holbrook	221A
Kearny	287C2
Kingman	234C, 260C1, 290C
Lake Havasu City	266C, 286C2
Marana	252A
Mesa	284C, 227C
Miami	252A
Nogales	252A
Oracle	276A

ARIZONA—Continued

	Channel No
Oraibi	252A
Oro Valley	248A
Page	228C3
Paradise Valley	290A
Parker	257A
Payson	266C, 282C
Phoenix	233C, 238C, 245C, 254C, 260C, [illegible] 273C
Pinetop	294C
Prescott	256C, 271C
Prescott Valley	294C2
Quartzsite	232A
Safford	231C1
Seligman	277A
St. Johns	239C
San Carlos	279A
Scottsdale	264C
Sedona	275C, 298C
Seligman	277A
Show Low	228A, 243C
Sierra Vista	265A, 269A
Springerville	269A
Sun City	292A
Tempe	250C
Thatcher	256C
Tuba City	250C3
Tucson	225C, 229C, 235C, 241C, 258C, 281A 298C
Tusayan	221A
Wickenburg	287C2
Willcox	252A
Williams	244A
Window Rock	241C, 276A
Winslow	236C, 286C
Yuma	226C, 236C2, 265A

ARKANSAS

	Channel No
Arkadelphia	265A
Ashdown	221A, 280A
Augusta	249C2
Bald Knob	296A
Barling	233A
Batesville	226C
Beebe	268A
Bella Vista	293C2
Benton	294C2
Bentonville	252A
Berryville	296A
Blytheville	242C
Booneville	284C2
Brinkley	272A
Cabot	273A
Camden	237A, 246C2, 283A
Cherokee Village	265A
Clarendon	297A
Clarksville	224A, 295A
Clinton	221A
Conway	224A, 286C1
Corning	228A
Crossett	285A
Dardanelle	272A
De Witt	244A
De Queen	224A

ARKANSAS—Continued

	Channel No
Dermott	276A, 289A
Dumas	296A
El Dorado	227A, 240A, 257A, 276A
England	243A
Eudora	268A
Eureka Springs	265A
Fairfield Bay	291C2
Fayetteville	221A, 280C1, 300C
Fordyce	269A
Forrest City	228A
Fort Smith	229C, 256C, 260C, 264C2
Glenwood	283A
Gould	273A
Greenwood	292C3
Grosnell	230A
Gurdon	224A
Hamburg	258A
Hampton	296A
Hardy	284A
Harrison	244A, 241C2, 275C
Heber Springs	244A
Helena	233A, 276A
Hope	269A, 285A
Horseshoe Bend	293A
Hot Springs	244A, 248C1, 290C1
Hot Springs Village	225A
Hoxie	287A
Humnoke	269A
Huntsville	225A
Jacksonville	262C1
Jonesboro	262A, 270C, 300C
Lake Village	240A
Little Rock	231C, 239C, 253C, 258A, 279C
Lonoke	292A
Lowell	270C2
Magnolia	300C1
Malvern	227A, 268A
Mammoth Spring	236C1
Marianna	295A
Marion	296A
Marked Tree	229A
Marshall	282C
Maumelle	245A
Mena	242C1, 269A
Monticello	228A, 260A
Morrilton	269A
Mountain Home	252A, 288A, 298C1
Mountain View	277C
Murfreesboro	237A
Nashville	288A
Newport	264A
North Crossett	274A
North Little Rock	266A
Osceola	251C
Ozark	244A
Paragould	285A, 296A
Paris	237A
Perryville	
Piggott	288A
Pine Bluff	222C1, 235C, 257A, 267A
Pocahontas	280A
Prairie Grove	235A
Rogers	232C3
Russellville	265A
Salem	240A
Searcy	260C2
Sheridan	275C2
Sherwood	271A
Siloam Springs	*266A, 289C
Springdale	285C2
Stamps	263C2
Stuttgart	288A
Texarkana	284A, 292A, 296A
Trumann	294A
Van Buren	272A
Waldron	276A
Walnut Ridge	292A
Warren	288A
West Helena	285A
Wilson	279A
Wrightsville	299A
Wynne	223C3
Yellville	249C2

EFFFECTIVE DATE NOTE: At 55 FR 38330, September 18, 1990, Wynne was amended by removing Channel 224A and adding Channel 223C3, effective October 29, 1990.

CALIFORNIA

	Channel No
Alameda	224A
Alturas	233C1
Anaheim	240A
Anderson	234C2
Apple Valley	272A
Arcadia	296A
Arcata	226C
Atascadero	283B
Atwater	223A
Auberry	286B1
Auburn	266B
Avalon	224A
Avenal	289A
Baker	268B
Bakersfield	221A, 231B, 243B, 257A, 268B, 296A, 300B
Barstow	232A, 240A
Berkeley	231B, 275B
Big Bear City	227A
Big Bear Lake	269A
Big Pine	227B
Bishop	264B
Blythe	262B
Brawley	233B, 241B
Burney	291C
Calexico	249A
Calipatria	265A
Camarillo	212B, 240B1
Cambria	235B1
Carlsbad	240A
Carmel	238A, 269A
Carnelian Bay	279C2
Carpinteria	269A
Cartago	275A
Cathedral City	253B
Central Valley	257A
Chester	255C, 287C2
Chico	230B1, 236B
China Lake	274A
Chowchilla	227A
Coachella	229B
Coalinga	261B
Colusa	276A, 298B

CALIFORNIA—Continued

	Channel No
Compton	272A
Copperopolis	288A
Corcoran	272B1
Corning	264B
Cresent City	232C3
Cresent North	250C3
Davis	288A
Delano	253B, 287B
Desert Center	288A
Dinuba	255B
Dunsmuir	261A
Earlimart	228A
East Porterville	263B1
El Cajon	227B
El Centro	238B
Ellwood	233B
Escondido	221A
Essex	255B
Eureka	222C, 242C, 288C, 288C1
Fallbrook	296A
Ferndale	257A
Firebaugh	276A
Ford City	271A
Fort Bragg	237A, 244A, 249A
Fowler	244B1
Freedom	298A
Fremont	285A
Fresno	229B, 239B, 250B, 257A, 266B, 270B, 274B, 290B
Garberville	284C
Garden Grove	232A
George	264A
Gilroy	233B
Glendale	270B
Goleta	292A
Gonzales	282A
Grass Valley	232A, 257A
Green Acres	292A
Greenfield	258B, 300B
Gridley	268A
Grover City	297B
Guadalupe	288A
Hanford	233A, 279B, 298B
Healdsburg	225B
Hemet	289A
Hollister	228A
Holtville	261A
Idyllwild	267A
Imperial	257A
Independence	292A
Indio	224A, 272A
Inglewood	280A
Jackson	232A
Johannesburg	280A
Julian	261A
Kerman	232A
Kernville	273A
King City	230B1, 271B
Kings Beach	299A
Kingsburg	292A
La Quinta	244A
Lake Arrowhead	280A
Lake Isabella	283A
Lakeport	252A, 258B
Lancaster	292A
Lemoore	285A
Lenwood	285A, 297A
Lindsay	277A

CALIFORNIA—Continued

	Channel No
Livermore	269A
Livingston	240A
Lodi	249A
Lompoc	262B1, 281B1, 28 294B1
Long Beach	250B, 288A
Los Altos	249A
Los Angeles	222B, 226B, 230B, 234B, 238B, 24 246B, 254B, 25 262B, 266B, 27 278B, 282B, 28 290B, 298B
Los Banos	284B, 295A
Los Gatos	237A
Los Osos Baywood Pk	267B
Lucerne Valley	293A
Ludlow	289A
Madera	221B1, 297A
Mammoth Lakes	292 A
Manteca	244A
Marina	224A
Mariposa	242B, 280A
Marysville	260B
McFarland	275B1
Mecca	249A
Mendocino	224A
Mendota	273A
Merced	248B, 292A, 29
Modesto	230A, 272A, 27 281B
Mojave	249A
Monte Rio	249A
Montecito	225A
Monterey	245B
Morro Bay	259A
Morgan Hill	241A
Mount Bullion	260B
Mount Shasta	300C1
Mountain Pass	258B
Needles	250C2
Newport Beach	276A
Oakdale	236B
Oakhurst	296A
Oceanside	271B
Oildale	237B1
OJAI	288A
Ontario	228A
Orange Cove	262A
Orcutt	239B1
Orland	293A
Oroville	249A
Oxnard	252A, 275A, 28
Pacific Grove	285A
Palm Dessert	276A
Palm Springs	263B1, 284B, 2
Paradise	244A, 278B1
Pasadena	294B
Paso Robles	223B
Patterson	226B
Pismo Beach	237A
Placerville	221A
Porterville	259B
Quincy	262A, 271C2, 2
Rancho Mirage	258A
Red Bluff	239B, 274C2
Redding	247C, 251C, 28
Redlands	244A
Redondo Beach	228A
Ridgecrest	224B1, 285A
Rio Dell	296A

CALIFORNIA—Continued

	Channel No
Riverside	224A, 248B, 256B
Rohnert Park	285A
Rohnerville	263A
Rosamond	288A
Roseville	229B1
Sacramento	223B, 241B, 245B, 253B, 263B, 278A, 286B, 293B, 300B
Salinas	250A, 264B, 273B, 280A
San Bernardino	236B, 260B
San Clemente	285A, 300B
San Diego	231B, 235B, 243B, 247B, 251B, 264B, 268B, 275B, 279B, 287B, 293B
San Fernando	232A
San Francisco	227B, 235B, 239B, 243B, 247B, 251B, 255B, 259B, 267B, 271B, 279B, 283B, 287B, 291B, 295B
San Jacinto	241A
San Joaquin	288A
San Jose	222B, 253B, 262B, 293B
San Luis Obispo	227B, 241B, 246B1, 251B
San Mateo	299B
San Rafael	264A
Santa Ana	244A, 292A
Santa Barbara	229B, 248B, 260B, 277B, 299B1
Santa Clara	289B
Santa Cruz	256B
Santa Margarita	291B1
Santa Maria	256B, 273B
Santa Paula	244A
Santa Rosa	261B1, 269A
Searcy	260C2
Seaside	278A, 296B1
Sebastopol	229A
Shafter	249A, 282A
Shingle Springs	270B1
Soledad	287A
Solvang	244A
Sonora	224A
South Lake Tahoe	230B1, 275B
South Oroville	285A
St. Helena	257A
Stockton	257A, 261A, 297B
Sun City	225A
Susanville	227C
Sutter Creek	298A
Taft	280A
Tahoe City	243C1
Tehachapi	276A
Temecula	233A
Thousand Oaks	216B 224A
Tracy	265A
Tulare	235B 294B
Turlock	252A
Twin Harte	228A
Twentynine Palms	239B1, 299A
Ukiah	233B, 277B, 290B
Vacaville	237B1
Ventura	236B, 264B, 296A
Victorville	276A
Visalia	255B, 241A, 246B
Walnut Creek	221A

CALIFORNIA—Continued

	Channel No
Weed	272C1
West Covina	252A
Willows	288A
Windon	254A
Woodlake	281B
Woodland	281B
Yermo	251B, 287A
Yreka	249C2
Yuba City	280A
Yucca Valley	295B

COLORADO

	Channel No
Alamosa	228A
Aspen	249C3, 296A
Avon	276C2
Basalt	291A
Boulder	234C, 247C
Breckenridge	272A
Brush	292A, 296C1
Buena Vista	281A
Burlington	281C1
Canon City	280A
Castle Rock	221A
Colorado Springs	225C, 230C, 236C, 251C, 270C
Cortez	250C, 254C
Craig	229C1, 273C
Delta	236C
Denver	239C, 253C, 258C, 262C, 266C, 278C, 286C, 290C, 294C
Durango	263C1, 267C1
Eagle	268C
Evergreen	243C
Fort Collins	227C, 300C
Fort Morgan	269A
Fountain	241A
Frisco	221A
Fruita	260C
Glenwood Springs	256C2
Grand Junction	222C, 226C, 282C, 300C
Greeley	223C1, 241C
Gunnison	252C3, 272A
Hayden	240C3
Holyoke	222C2
Idalia	231A
Julesburg	243C1
Kremmling	292C2
La Junta	221C3, 295A
Lakewood	298C
Lamar	227C1, 289C1
Las Animas	297A
Leadville	228A
Longmont	282C1
Loveland	273C2
Manitou Springs	274C
Monte Vista	237A
Montrose	231C, 241C
Oak Creek	280A
Ouray	289C2
Pagosa Springs	292C3
Pueblo	245C, 255C, 260C, 264C, 283C1, 296C2, 300C1

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COLORADO—Continued

	Channel No
Rifle	287C
Rocky Ford	238C1
Salida	221A
Security	288C3
Silverton	257A, 279C2, 297C
Snowmass Village	280A
Steamboat Springs	245C2
Sterling	284C1, 288A
Strasburg	272A
Trinidad	223C
Vail	284C1
Walsenburg	272C3
Widefield	292C2
Windsor	256C
Wray	252C2
Yuma	265C3

CONNECTICUT

	Channel No
Bridgeport	260B
Brookfield	236B
Danbury	252A
East Lyme	254A
Enfield	250A
Groton	288A
Hamden	267B
Hartford	229B, 243B, 275B, 290B, 295B
Hartford-Meriden	239B
Ledyard	293A
Litchfield	247A
Middletown	285A
New Britain	263B
New Haven	232A, 256B
New London	265A
Norwalk	240A
Norwich	249A
Pawcatuck	299A
Salisbury	251A
Sharon	277A
Stamford	244A
Stonington	272A
Waterbury	223B, 281B
Westport	300B
Willimantic	252A

DELAWARE

	Channel No
Bethany Beach	240A
Dover	234B
Fenwick Island	221A
Georgetown	228B1
Laurel	237A
Lewes	290A
Milford	249A, 267A
Ocean View	269A
Rehoboth Beach	224A
Seaford	252A
Selbyville	250A
Smyrna	225A
Wilmington	229B, 258B

DISTRICT OF COLUMBIA

	Channel No
Washington	230B, 242B, 246B 254B, 258B, 262B, 266B 278B, 297B

FLORIDA

	Channel No
Alachua	223A
Apalachicola	265A, 288A
Apopka	237A
Arcadia	252C3
Atlantic Beach	283C
Avon Park	292A
Baldwin	289A
Belle Glade	228A
Beverly Hills	246A
Big Pine Key	284C
Blountstown	272A
Boca Raton	260C
Bonifay	249C1
Bonita Springs	241C
Bradenton	277C
Callaway	278C1
Cape Coral	279C2, 292A
Cedar Key	274A
Century	286A
Chattahoochee	287A
Chiefland	247A
Clearwater	239C1, 250C
Clewiston	292A
Cocoa	257C2
Cocoa Beach	266C, 281C
Coral Cove	300A
Coral Gables	286C
Crestview	284C2
Cross City	295C1
Crystal City	253C
Daytona Beach	233C, 270C1
Defuniak Springs	276A
Deland	290C
Destin	221C3
Dunnellon	272C2
Edgewater	226A
Englewood	290A
Fernandina Beach	287A
Five Points	293A
Fort Lauderdale	264C, 278C, 290C, 294C
Fort Myers	237C1, 245C, 270C
Fort Myers Beach	257C2
Fort Myers Villas	292A
Fort Pierce	238C1, 254C
Fort Walton Beach	243C, 258C2
Gainesville	265A, 279C, 288A
Gifford	234A
Goulds	252C
Graceville	271A
Green Cove Springs	224A
Gretna	264A
Gulf Breeze	291A
Havana	285C2
Hialeah	222C2
High Springs	285A
Holiday	292A
Holly Hill	277A
Holmes Beach	254C3

FLORIDA—Continued

	Channel No.
Homestead	239C1
Homosassa Springs	237A
Immokalee	221A
Jacksonville	236C, 241C, 245C, 256C, 275C, 297C
Jensen Beach	272A
Jupiter	258A, 288A
Key Colony Beach	288A
Key Largo	280A
Key West	223C1, 228C2, 254C, 258C, 296A, 300C1
LaBelle	223A
Lafayette	260A
Lake City	232C2
Lakeland	231C
Leesburg	294C
Lehigh Acres	296C2
Live Oak	251C1, 291A
MacClenny	221A
Madison	274A
Marathon	232C2, 249A, 292A
Marco	224A, 266C1
Marianna	227A, 265A
Mary Esther	288A
Melbourne	272A, 292A, 296C1
Mexico Beach	257C2
Miami	226C1, 243C 247C, 256C, 268C1, 298C1
Miami Beach	230C, 235C
Micanopy	249A
Milton	274C
Monticello	270A
Mount Dora	299C
Naples	228A, 233C, 276A
Naples Park	288A
Newberry	263A
New Port Richey	288A
Niceville	262A
Ocala	224A, 229C
Okeechobee	276A
Orlando	222C, 243C, 255C2, 262C, 286C
Ormond-By-The-Sea	239A
Palatka	260C
Palm Beach	250C
Panama City	223C, 253C, 290C2, 300C
Panama City Beach	286C2
Pensacola	231C, 254C2, 264C, 268C1, 297C
Perry	288A
Plantation Key	262C1, 276A
Pompano Beach	274C
Ponte Vedra Beach	227A
Port Charlotte	261C1
Port St. Joe	228C3, 233C
Port St. Lucie	267A
Punta Gorda	225C2
Punta Rassa	249A
Quincy	268C2, 274A
Riviera Beach	232A
Rock Harbor	271C2
Rockledge	274A
Safety Harbor	223C2
Sanibel	253A
Santa Rosa Beach	272A
Sarasota	273C, 288A, 292A
Sebring	288A
Silver Springs	238A
Solana	287A
Springfield	240C2, 270A
St. Augustine	250C2, 288A
St. Petersburg	258C, 268C1, 297C1
Starke	292A
Stuart	224C2
Summerland Key	273C2
Tallahassee	235C, 241C2, 255C1, 276A, 281C, 291A
Tampa	227C, 235C, 264C1, 284C
Tavernier	245A
Tice	229A
Titusville	251C2
Trenton	269A
Venice	221A
Vero Beach	229C2, 259C2, 269A, 279C2
Watertown	271A
West Palm Beach	221A, 282C, 300C
White City	284A
Williston	221A
Winter Haven	248C
Winter Park	276A

Effective Date Note 1. At 55 FR 36823, September 7, 1990, Destin was amended by removing Channel 221A and adding Channel 221C3, effective October 19, 1990.

Effective Date Note 2. At 55 FR 38330, September 18, 1990, Holmes Beach was amended by removing Channel 254A and adding Channel 254C3, effective October 23, 1990.

GEORGIA

	Channel No.
Adel	221A
Albany	242C1, 269A, 283C1
Alma	282A
Americus	232A, 249A
Ashburn	289A
Athens	238C, 284C
Atlanta	225C1, 235C, 241C, 253C, 259C, 277C
Augusta	272A, 276A, 282C, 289C
Bainbridge	247C
Baxley	233C
Blackshear	286C2
Blakely	226A
Blue Ridge	280A
Bolingbroke	271A
Boston	292A
Broxton	279A
Brunswick	264C1, 268C
Buford	272A
Cairo	272A
Camilla	288A
Canton	289C2
Carrollton	221A
Chatsworth	255A
Chauncey	267C2
Clarkesville	275A
Claxton	296A
Clayton	281A
Cleveland	270A
Cochran	244A
Columbus	275C, 285A, 297C
Coosa	237A
Cordele	252A

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GEORGIA—Continued

	Channel No
Cornelia	257C2
Crawford	271A
Cuthbert	264A
Dahlonega	282A
Dalton	283A
Dawson	221A
Dock Junction	290A
Donalsonville	292A
Douglas	223A, 258C, 294C1
Dublin	224C2, 240C2
Eastman	248A
Elberton	221A
Ellijay	228A
Evans	222A
Fitzgerald	245A
Folkston	223A
Forsyth	261A
Fort Valley	250A, 292C2
Gainesville	246C
Gainsville	294C
Glennville	292A
Gordon	296A
Gray	243A
Greensboro	280A
Griffin	249A
Harlem	236A
Hawkinsville	280A
Hazlehurst	228A
Helen	286A
Hinesville	222C2, 284A
Hogansville	248A
Homerville	288A
Irwinton	279A
Jackson	221A
Jeffersonville	229A
Jesup	252C1, 288A
Kingsland	292A
La Grange	281C1
Lakeland	290A
Leesburg	279A
Louisville	221A
Lumpkin	257C2
Lyons	265A
Mableton	273A
Macon	222A, 256C1, 287C, 300C1
Manchester	227C
Marietta	268C
Martinez	230C3, 299C2
McRae	237A
Metter	285A
Milan	285A
Milledgeville	264A, 272A
Millen	235A
Montezuma	236A
Moultrie	230C1
Nashville	237A
Newnan	244A
Ocilla	249A, 253A
Omega	298A
Pearson	270A
Perry	265A
Quitman	287A
Reidsville	281A
Richmond Hill	287A
Ringgold	229A, 270A
Rockmart	296C2
Rome	249C3, 272A
Rossville	288A
Roswell	298A

GEORGIA—Continued

	Channel No
Royston	279A
Sandersville	228A
Savannah	226C1, 231C, 243C, 247C,
Smyrna	231C
Soperton	269A
Sparta	249A, 274A
Springfield	280A
St. Marys	227C2
St. Simons Island	224A
Statesboro	261C2, 275A
Swainsboro	251A, 280A
Sylvania	293A
Sylvester	271A, 291A
Thomaston	237A
Thomasville	296C1
Thomson	269A
Tifton	262C
Toccoa	291C
Trenton	274A
Trion	239A
Unadilla	278A
Valdosta	225C1, 239C2, 266C1, 299A
Vidalia	249A
Warner Robins	269A, 273A
Warrenton	226A
Washington	261A
Waycross	249A, 273C1,
Waynesboro	265A, 296A
Westpoint	265A
Wrens	244A
Wrightsville	298A
Zebulon	223A

EFFECTIVE DATE NOTE: At 55 FR 39969, October 1, 19 Sylvania, Channel 293A was added, effective Novembe 1990.

HAWAII

	Channel No
Aiea	300C
Hali'imaile	288A
Hilo	224C1, 234C1, 250C1, 262C1
Honolulu	226C1, 230C1, 238C1, 248C1, 253C1, 258C1, 262C1, 286C,
Kahalu'u	291A
Kahului	260C1
Kailua	242C
Kailua-Kona	230C
Kaneohe	282C
Kawaihae	295A
Kealakekua	221A
Kekaha	277A
Lahaina	228C3, 266C1
Lanai City	284A
Lihue	228C1, 245C1
Makawao	232A
Paauilo	279C
Pearl City	270C
Princeville	255C1
Pukalani	252C2
Volcano	299A
Wailuku	236C
Waimea	256C

HAWAII—Continued

	Channel No.
Waipahu	222C, 274C

IDAHO

	Channel No.
American Falls	281A
Blackfoot Falls	247C, 268C,
Boise	222C, 250C, 262C, 266C
Bonners Ferry	221A
Burley	260C
Caldwell	231C, 277C, 296A
Chubbuck	253C2
Coeur D'Alene	272A, 276C2
Emmett	270C
Garden City	290C
Gooding	267A
Grangeville	224C3
Hayden	233A
Idaho Falls	241C, 256C1, 277C1, 288C1
Island Park	293C
Jerome	275C1
Ketchum	284A
Lewiston	243C, 268C1, 295C
McCall	252A, 266C1, 294A
Moscow	291C1
Mountain Home	256C1
Nampa	235C, 245C
New Plymouth	226C
Orofino	237C3
Payette	262C1
Pocatello	229C, 235C, 273C
Preston	244A
Rexburg	232C3, 251C2, 263C1
Rupert	223C
Salmon	224A
Sandpoint	237A, 273A
Soda Springs	261A
Sun Valley	237C3, 279C
Twin Falls	239C1, 243C1
Wallace	248C, 264C
Weiser	257A

ILLINOIS

	Channel No.
Aledo	272A
Alton	262B
Anna	243C2
Arlington Heights	224A
Augusta	266A
Aurora	240A, 300B
Ava	280A
Beardstown	232A
Belvidere	285A
Benton	292A
Bethalto	238A
Bloomington	268B
Bushnell	284A
Canton	265A, 300B1
Carbondale	268B
Carmi	247B
Carrier Mills	283A

ILLINOIS—Continued

	Channel No.
Carterville	236A
Carthage	221A
Casey	282B1
Centralia	237A
Champaign	233B, 248B, 282B1
Charleston	221A
Chicago	226B, 230B, 234B, 238B, 242B, 246B, 250B, 254B, 258B, 262B, 266B, 278B, 282B, 298B
Chillicothe	232A
Christopher	278A
Clinton	240A
Coal City	264A
Columbia	285A
Crest Hill	252A
Crete	272A
Danville	235A, 256B, 271B
Decatur	226A, 236B, 275B
DeKalb	223B, 235A
Des Planes	294B
Dixon	269A
Duquoin	240A
Dundee	280A
Dwight	255A
East Moline	267B
East St. Louis	266B
Effingham	239B, 249A
Eldorado	272A
Elgin	232A
Elmwood	247B1
Elmwood Park	290B
Eureka	253A
Evanston	286B
Fairfield	285A
Farmer City	252A
Farmington	234A
Flora	280A
Freeport	221A, 253B
Galena	298A
Galesburg	224A, 235B
Galva	273A
Geneseo	285A
Gibson City	292A
Golconda	232A
Granite City	293C1
Greenville	269A
Harrisburg	260B
Havana	257A
Henry	263A
Herrin	224A
Highland Park	276A
Hillsboro	259B
Hoopeston	265A
Jacksonville	263B
Jerseyville	281B
Joliet	228A, 244A
Kankakee	224A, 236A, 260B
Kewanee	221A
La Salle	257B1
Lansing	292A
Lawrenceville	276A
Leroy	281B1
Lincoln	261A
Litchfield	291B
Loves Park	244A
Lutesville	286A
Lynnville	296A
Macomb	261A, 274B1

ILLINOIS—Continued

	Channel No.
Mahomet	290A
Marion	297B
Marseilles	243A
Marshall	290A
Mattoon	245B, 267A
Mendota	261A
Metropolis	252A, 288A
Moline	245B
Monmouth	249A
Monticello	288A
Morris	284B
Morrison	236A
Morton	272A
Mount Carmel	235B
Mount Morris	239A
Mount Vernon	231B, 271B1
Mount Zion	257A
Murphysboro	286B1
Nashville	284A
Newton	278A
Normal	244A
Oak Park	274B
Olney	225B
Oregon	291A
Ottawa	237A
Pana	265A
Paris	253B
Paxton	285A
Pekin	238B1, 285A
Peoria	222A, 227B, 289B, 295B
Peru	265A
Petersburg	249A
Pinckneyville	282A
Pittsfield	248B1
Plano	296A
Polo	299A
Pontiac	276A
Princeton	252A
Quincy	258B, 280A, 286B
Ramsey	227A
Rantoul	237A, 241A
Robinson	269A
Rochelle	272A
Rock Island	255B
Rockford	248B, 265A
Rockton	276A
Rushville	244A
Salem	261A
Savanna	262B1
Seneca	239A
Shelbyville	286B1
Skokie	270B
South Jacksonville	288A
Spring Valley	277A
Springfield	254B, 270B, 279B, 283B
Sterling	232A
Streator	249A, 291A
Sullivan	294B1
Taylorville	224A
Tuscola	228A
Urbana	223B1, 296A
Vandalia	296A
Virden	244A
Watseka	231B
Waukegan	272A
West Frankfort	249A
Wilmington	288A
Winnebago	237A
Woodlawn	295A
Woodstock	288A
Zion	245B

INDIANA

	Channel No.
Alexandria	224A
Anderson	250B, 254A
Angola	261A
Attica	239A
Auburn	272A
Aurora	257A
Austin	224A, 242A
Batesville	280A
Battle Ground	254A
Bedford	288A
Berne	230A
Bicknell	289A
Bloomfield	266A
Bloomington	222B, 224A, 279B
Bluffton	261A
Booneville	296A
Brazil	249A
Bremen	245A
Brownsburg	270A
Cannelton	275A
Chandler	228A
Charlestown	282A
Churubusco	242A
Clarksville	226A
Clinton	230A
Columbia City	292A
Columbus	268B, 285A
Connersville	262B
Corydon	243A, 299B
Covington	276A
Crawfordsville	280A, 292A
Crown Point	280A
Danville	296A
Decatur	224A
Delphi	275A
Earl Park	251B1
Elkhart	264B, 284B
Ellettsville	286A
Elwood	269A
Evansville	281B, 287B, 298A
Fort Branch	268A
Fort Wayne	222A, 236B, 247B, 269A, 280A
Frankfort	259B
Franklin	240A
French Lick	261A
Garden City	275A
Goshen	249A
Greencastle	232A
Greenfield	258B
Greensburg	297B
Greenwood	294A
Hammond	222B
Hartford City	228A
Huntingburg	265A
Huntington	275A
Indianapolis	226B, 234B, 238B, 242A, 277B, 283B, 289B, 300B
Jasper	284B

INDIANA—Continued

	Channel No.
Jeffersonville	239B
Kendallville	227B
Kentland	269A
Knox	257A
Kokomo	224A, 263B
La Porte	244A
Lafayette	228A, 243B, 287B
Lagrange	288A
Lebanon	265A
Ligonier	274A
Linton	227B1
Logansport	272A
Loogootee	232A
Lowell	296A
Madison	244A
Marion	295B
Martinsville	272A
Michigan City	240A
Mitchell	273A
Monticello	237A, 299A
Mount Vernon	294A
Muncie	221A, 281B, 285A
Nappanee	239A
Nashville	236A
New Carlisle	272A
New Castle	273B
New Haven	300A
Newburgh	291A
Noblesville	230A
North Vernon	291B
Paoli	237A
Peru	252A
Petersburg	272A
Plainfield	252A
Plymouth	232A
Portland	265A
Princeton	251B, 263A
Rensselaer	249A
Richmond	241B, 267B
Roanoke	286A
Rochester	221A
Rockville	285A
Royal Center	279A
Rushville	232A
Salem	250A, 255B
Santa Claus	277A
Scottsburg	265A
Seymour	229B
Shelbyville	246B
South Bend	225B, 268B, 276A, 280A, 292A
South Whitley	266A
Spencer	224A
Sullivan	237A
Syracuse	278A
Tell City	245A
Terre Haute	260B, 264B, 274B, 298B
Valparaiso	288A
Van Buren	257A
Versailles	276A
Vevay	240A
Vincennes	221A, 244A
Wabash	240A, 290A
Warsaw	297B
Washington	293B, 300A
West Lafayette	*267A, 294A
West Terre Haute	288A
Winamac	261A

INDIANA—Continued

	Channel No.
Winchester	252A

IOWA

	Channel No.
Algona	224C2
Ames	281C, 296A
Ankeny	223C2, 292A
Atlantic	279C1
Belle Plaine	238A
Bettendorf	228A
Bloomfield	292A
Boone	252C3, 257A
Brooklyn	256C2
Burlington	228A 297C1
Carroll	229C1
Cedar Rapids	243C1, 251C, 275C, 283C
Centerville	254C1
Chariton	288A
Charles City	240A
Cherokee	221A 272A
Clarinda	291C2
Clarion	245C1
Clear Lake	276A
Clinton	241C1, 249A
Council Bluffs	253C
Cresco	272A
Creston	267C3
Davenport	279C, 293C1
Decorah	263C2
Denison	296A
Des Moines	227C, 235C, 247C, 262C, 273C, 298C2
Dubuque	225C, 272A, 287C2
Dyersville	257A
Eddyville	268C2
Eldora	258A
Emmetsburg	252A
Estherville	240C2
Fairfield	240A
Forest City	297C2
Fort Dodge	221A, 233C1
Fort Madison	269C2
Garnavillo	261A
Grinnell	294C2
Grundy Center	249A
Hampton	255A, 285A
Harlan	288A
Humboldt	249A
Ida Grove	225C2
Independence	237A
Iowa City	231C1, 264C1
Iowa Falls	237A
Jefferson	255A
Keokuk	237A, 242C2, 290C2
Knoxville	221C3
Lamoni	249A
Le Mars	258C1
Manchester	234A
Maquoketa	237A
Marshalltown	266C1
Mason City	230C1, 250A, 291C1
Mount Pleasant	288A
Muscatine	259C1
New Hampton	236A
Newton	240A

IOWA—Continued

	Channel No.
Northwood	274A
Oelwein	222C
Onawa	272C1A
Osage	279A
Osceola	295C2
Oskaloosa	285C2
Ottumwa	224C3, 249A
Pella	277C
Perry	269A
Red Oak	237C3
Rock Valley	295A
Sac City	286A
Sheldon	288A
Sibley	262A
Sioux Center	230C2
Sioux City	238C, 250C, 277C1
Sioux Rapids	275C2
Spencer	285A, 299C1
Spirit Lake	280C2
Storm Lake	268C1
Stuart	300A
Twin Lakes	290C3
Vinton	296A
Washington	237A
Waterloo	270C, 289C, 300C
Waukon	280A
Waverly	257A
Webster City	239C2
Winterset	258A

EFFFECTIVE DATE NOTE: At 55 FR 35145, August 28, 1990, Red Oak was amended by removing Channel 237A and adding Channel 237C3, effective October 10, 1990.

KANSAS

	Channel No.
Abilene	253C1
Arkansas City	293C
Augusta	283A
Baxter Springs	296A
Belleville	221A
Beloit	288C2
Burlington	237A
Caney	266A
Chanute	228A
Clay Center	265A
Coffeyville	225A
Colby	250C, 262C1
Columbus	252A
Concordia	237A
Copeland	256C1
Derby	242C2
Dodge City	230C1, 238C1
Downs	231C
El Dorado	256C1
Emporia	258A, 269A, 285A
Eureka	228A
Fort Scott	269A, 280A
Fredonia	281A
Garder City	247C1
Girard	256A
Goodland	273C, 299C1
Great Bend	282C1, 300C1
Hays	258C1, 277C1
Haysville	287C
Herington	289A
Hiawatha	280C2
Hill City	270C

KANSAS—Continued

	Channel No.
Hoisington	264C1
Hugoton	294C2
Hutchinson	264A, 271C, 275C
Independence	269A
Iola	257A
Junction City	233C1
Kansas City	231C, 251C
Kingman	232A, 262C2
Larned	244A, 295A
Lawrence	290C1
Leavenworth	255C
Leoti	260C1
Liberal	268C1, 274C1, 28 298C1
Lindsborg	240A
Lyons	291C1
Manhattan	268C2, 284C2
Marysville	276C3
McPherson	244A
Medicine Lodge	240A
Minneapolis	224A
Ness City	285A
Newton	222C1
North Fort Riley	273C2
Norton	294C1
Oberlin	266C1
Ogden	278C2
Olathe	222A
Osage City	225C2
Ottawa	239C1
Parsons	228A
Phillipsburg	223C1, 237A
Pittsburg	245C
Plainville	244A
Pratt	226C
Rozel	254A
Russell	240A
Salina	229C1, 260C1, 28
Scott City	223C1
Seneca	221A
Topeka	223A, 247C, 262C, 295C, 299C
Wamego	237A
Wellington	228A
Wichita	236C, 250C, 267C, 279C, 297C1
Winfield	232A

EFFECTIVE DATE NOTE: At 55 FR 36824, Septembe 1990, Ogden was amended by removing Channel 278A a adding Channel 278C2, effective October 19, 1990.

KENTUCKY

	Channel No.
Albany	292A
Allen	261A
Ashland	229C1
Barbourville	228A
Bardstown	244A
Beattyville	272A
Beaver Dam	274A
Benton	256A
Berea	294A
Bowling Green	244A, 252A
Brandenburg	228A
Buffalo	268A
Burkesville	300A
Burnside	230C2

KENTUCKY—Continued

	Channel No.
Cadiz	292A
Calvert City	239A
Campbellsville	260A, 281A
Carlisle	264A
Carrollton	237A
Catlettsburg	224A
Cave City	279A
Central City	270C
Columbia	228A
Corbin	258C2, 297C2
Cumberland	274A
Cynthiana	272A
Danville	296A
Drakesboro	280A
Edmonton	256A
Elizabethtown	261A
Elkhorn City	276A
Eminence	289A
Erlanger	265A
Falmouth	298A
Flemingsburg	292A
Fort Campbell	300C1
Fort Knox	288A
Frankfort	279A, 285A
Fulton	257A
Georgetown	276A
Glasgow	236C, 288A
Grayson	272A
Greensburg	276A
Greenup	288A
Greenville	288A
Hardinsburg	232A
Harlan	286A
Harrodsburg	257A
Hartford	292A
Hawesville	289A
Hazard	266C, 284A
Henderson	258C, 276A
Hindman	296A
Hodgenville	292A
Hopkinsville	254C1, 262C
Horse Cave	264A
Hyden	222A
Irvine	291A
Jackson	249A
Jamestown	285A
Jeffersontown	269A
Jenkins	232C2
Lancaster	286A
Lawrenceburg	271A
Lebanon	265A
Leitchfield	285A
Lexington	225C1, 233C1, 251C1
Lexington-Fayette	283C2
Liberty	254A
London	223A, 280A
Louisa	222A
Louisville	248C1, 259B, 263C2, 272A, 280A, 295B
Madisonville	230C2, 295A
Manchester	276A, 289A
Marion	274A
Mayfield	234C2
Maysville	240A
McKee	300A
Middlesboro	224A
Midway	300A
Monticello	226A, 269A
Morehead	221A, 242A
Morganfield	237A
Mount Juliet	294A
Mount Sterling	288A
Mount Vernon	275A
Munfordville	272A
Murray	279C1
Nicholasville	273A
Owensboro	223C, 241C
Owingsville	296A
Paducah	227C1, 245C1
Paintsville	234C3, 255C1
Paris	245C2
Philpot	234A
Pikeville	221A
Pineville	292A
Prestonsburg	238C, 288A
Princeton	285A
Providence	249A
Radcliff	278A
Reidland	294A
Richmond	269A
Russell Springs	224A
Russellville	266C1
St. Matthews	276A
Salyersville	247A
Scottsville	257A
Shelbyville	267A
Shepherdsville	286A
Smiths Grove	296C2
Somerset	246C2, 272A
Springfield	274A
Stamping Ground	256A
Stanford	240A
Stanton	285A
Tompkinsville	221A
Valley Station	290A
Vanceburg	285A
Vancleve	260A
Versailles	292A
Virgie	298A
West Liberty	275A
Westwood	259A
Whitesburg	280A
Whitley City	290A
Wickliffe	240A
Williamsburg	282A
Williamstown	293A
Wilmore	290A
Winchester	261C2

EFFECTIVE DATE NOTE 1: At 55 FR 35905, September 4, 1990, Morehead was amended by adding Channel 242A; and Westwood, Channel 259A was added, effective October 15, 1990.

EFFFECTIVE DATE NOTE 2: At 55 FR 38551, September 19, 1990, Carlisle, Channel 264A was added, effective October 29, 1990.

LOUISIANA

	Channel No.
Abbeville	286C3
Alexandria	226C, 230A, 245C, 262C
Arcadia	223A
Baker	297A
Basile	271C3
Bastrop	232A, 261C2, 277A
Baton Rouge	251C, 264C, 268C, 273C

LOUISIANA—Continued

	Channel No.
Bayou Vista	237C3
Belle Chasse	275A
Benton	221A
Berwick	290A
Boyce	272A
Breaux Bridge	243A
Brusly	242A
Bunkie	282C3
Buras Triumph	231A
Clinton	224C2
Columbia	276A
Coushatta	235C3
Crowley	275C
Delhi	228A
Deridder	221A, 269A
Donaldsonville	285A
Dubach	249A
Erath	299A
Eunice	288A
Farmerville	224A
Ferriday	296C3
Folsom	285A
Franklin	288A
Galliano	232C2
Hammond	277C, 296A
Haughton	279A
Haynesville	288A
Homer	260A, 294C2
Houma	281C, 298C1
Jena	257A
Jennings	225C2
Jonesboro	285A
Jonesville	266A
Kaplan	247C2
Lacombe	234A
Lafayette	233C, 238A, 260C
Lake Arthur	297A
Lake Charles	241C, 258C, 279C, 287C2
Lake Providence	224A
LaPlace	222C
Larose	262A
Leesville	224A, 288A
Mamou	266A
Mansfield	224A
Many	296C3
Marksville	249A
Maurice	292A
Minden	237A
Monroe	270C, 281C, 287C2, 291C
Moreauville	221A
Morgan City	244A
Natchitoches	240A, 249A
New Iberia	229C2, 256C
New Orleans	227C, 239C, 246C, 253C, 258C, 266C, 270C
New Roads	293C2
North Fort Polk	294A
Oak Grove	244C3
Oakdale	254C2
Opelousas	290A, 296A
Port Sulphur	294C1
Rayne	294A
Rayville	222C2
Reserve	235A
Ruston	258A, 298C
Shreveport	229C, 233C, 243C1, 261A, 266C, 275C2
Slidell	287C1
South Fort Polk	267A
Springhill	224A
Sulphur	265A
Tallulah	285A
Thibodaux	292A
Tioga	278C2
Varnado	225A
Vidalia	284A
Ville Platte	228A
Vivian	239A
Washington	284A
West Monroe	252C2
Winnfield	221A
Winnsboro	240A

EFFECTIVE DATE NOTE 1: At 55 FR 35146, August 2 1990, Bunkie was amended by removing Channel 282A an adding Channel 282C3; Clinton was amended by removing Channel 224A and adding Channel 224C2; and Varnado wa amended by removing Channel 224A and adding Chann 225A, effective October 10, 1990.

EFFECTIVE DATE NOTE 2: At 55 FR 37237, September 1 1990, Coushatta was amended by removing Channel 224 and adding Channel 235C3, effective October 22, 19

EFFECTIVE DATE NOTE 3: At 55 FR 39969, October 1 1990, Abbeville was amended by removing Channel 285 and adding Channel 286C3, effective November 8, 19

MAINE

	Channel No.
Auburn	260B
Augusta	222B, 267B
Bangor	225B, 246B
Bar Harbor	256B1, 299B
Bath	290B
Belfast	284B
Biddeford	232B1
Boothbay Harbor	244B1
Brewer	262B, 293C
Brunswick	255B
Calais	224A
Camden	273B
Caribou	249A
Dennysville	275A
Dexter	271A
Dover-Foxcroft	276A
Ellsworth	233B, 239B
Fairfield	227A
Farmington	257A
Gardiner	282B
Houlton	261A
Howland	280A
Kennebunk	257A
Kennebunkport	284A
Kittery	287A
Lewiston	230B, 298B
Lincoln	289C2
Machias	237A
Madawaska	272A
Madison	248A
Mexico	264A
Milbridge	229B
Millinocket	235C2
North Windham	294A
Norway	224A
Old Town	297B
Pittsfield	258A

MAINE—Continued

	Channel No.
Portland	226B, 250B, 270B, 275C
Presque Isle	241C, 245C, 269A, 291C
Rockland	277B
Rumford	242C
Saco	240A
Sanford	221A
Scarborough	292A
Skowhegan	286C, 300A
Thomaston	295, 295B
Topsham	238A
Van Buren	251A
Waterville	253C2
Westbrook	265A
Winslow	237A
York Center	237A

MARYLAND

	Channel No.
Annapolis	256B, 300B
Baltimore	222B, 226B, 236B, 250B, 270B, 274B, 282B, 293B
Berlin	280A
Bethesda	234B, 272A
Braddock Heights	280A
California	275A
Cambridge	232A, 292A
Catonsville	289B
Crisfield	245A
Cumberland	275B, 291B
Easton	244B1
Federalsburg	296A
Frederick	260B
Frostburg	*246A, 287B
Glen Burnie	240A
Grasonville	276A
Hagerstown	284B, 295B
Halfway	244A
Havre De Grace	279B
Hurlock	265A
Lexington Park	249A
Mechanicsville	252A
Middletown	276A
Morningside	238B
Mountain Lake Park	255A
Oakland	221A
Ocean City	260B
Ocean City-Salisbury	284B
Ocean Pines	246A
Pocomoke City	293A
Prince Frederick	224A
Princess Anne	273B
Salisbury	248A, 255A, 288A
Waldorf	281, 281B
Westernport	224A
Westminster	264B
Williamsport	240A

MASSACHUSETTS

	Channel No.
Amherst	265A
Athol	260A
Barnstable	260B
Boston	233B, 245B, 253B, 264B, 277B, 281B, 294B
Brockton	249A
Brookline	225B
Cambridge	237A
Chatham	298B
Fairhaven	296A
Falmouth	266A, 270B
Fitchburg	283B
Framingham	289B
Gloucester	285A
Great Barrington	286A
Greenfield	237A, 252A
Harwichport	228A
Haverhill	223B
Hyannis	275A, 291B
Lawrence	229B
Lowell	258B
Lynn	269A
Marshfield	240A
Medford	300B
Nantucket	242B
New Bedford	247B, 251B
North Adams	261A
Northampton	257A, 292A
Orange	247A
Orleans	284B
Pittsfield	240A, 269A, 288A
Plymouth	256B
Southbridge	261A
South Yarmouth	280A
Springfield	226B, 234B, 271B
Taunton	227B
Tisbury	224A
Truro	272A
Turners Falls	230A
Waltham	273B
Webster	255A
West Yarmouth	235B
Winchendon	249A
Worcester	241B, 297B

MICHIGAN

	Channel No.
Adrian	237A, 280A
Albion	244A
Allegan	222A
Alma	285A
Alpena	257C2, 299C1
Ann Arbor	275B, 296A
Atlanta	223C
Bad Axe	271C2
Baraga	282C
Battle Creek	237A, 277B
Bay City	241C, 273B
Bear Lake	261A
Beaverton	249A
Benton Harbor	235A, 260B
Beulah	221A
Big Rapids	265A, 272A
Birmingham	234B
Boyne City	228A

MICHIGAN—Continued

	Channel No.
Bridgman	248A
Brooklyn	287A
Buchanan	256A
Cadillac	225C, 244A, 296A
Caro	221A
Carrollton	263A
Charlevoix	290C
Charlotte	224A
Cheboygan	286C1
Clare	237A
Coldwater	253B
Coleman	268A
Crystal Falls	264C1
Dearborn	262B
Detroit	222B, 226B, 238B, 242B, 246B, 250B, 254B, 258B, 266B, 270B, 278B, 282B, 286B, 290B, 294B, 298B
Dewitt	243A
Dowagiac	221A
East Jordan	265A
East Lansing	235B, 256B
Escanaba	284C, 246C
Essexville	247A
Flint	224A, 236B, 288B1, 300B
Frankfort	257C2
Fremont	261A
Gaylord	237A, 294C
Gladstone	288C1
Gladwin	276C3, 280A
Glen Arbor	240A, 251C3
Grand Haven	221A
Grand Rapids	229B, 239B, 245B, 250B, 255A, 267B, 275B, 281B, 289B
Grayling	262C2
Greenville	297B
Gulliver	234C1
Hancock	228C3, 254C2
Harbor Beach	279C2
Harbor Springs	280C2
Harrison	221A
Hart	287C
Hartford	279A
Hastings	261A
Hillman	235C2
Hillsdale	221A
Holland	233B, 241B
Houghton	242C, 249A, 272A
Houghton Lake	253C1
Howell	226A
Hudson	273A
Iron Mountain	226C1, 268C1
Iron River	256C2
Ironwood	259C1, 295C1
Ishpeming	222C, 298C1
Jackson	231B, 291B
Kalamazoo	271B, 293B, 299B
Kalkaska	248C2
Kingsford	251A
L'Anse	291C2
Lakeview	292A
Lansing	248B, 264B, 269A
Lapeer	276A
Leland	232C3
Lexington	245A
Ludington	292A
Mackinaw City	232A
Manistee	249A, 300A
Marquette	239C1, 277C1
Marshall	285A
Menominee	280A
Midland	227C2, 259C
Mio	230C2
Monroe	252A
Mount Clemens	274B
Mount Pleasant	233C1, 282A
Munising	252 C2
Muskegon	269A, 283B, 295B, 300A
Newberry	229C2, 250C2
Niles	237A
North Muskegon	252A
Norway	232A
Ontonagon	266C2
Oscoda	239 C2, 261A
Otsego	265A
Owasso	280A
Pentwater	231A, 276A
Petoskey	242C1, 255C
Pinconning	265A
Port Huron	272A, 296A
Portage	243A
Rogers City	244C2
Roscommon	266A
Saginaw	251B, 283A, 292A, 296A
Sandusky	249A
Saugatuck	224A
Sault Ste. Marie	252C3, 258C1, 287C
Scottville	240A
Sebewaing	267A
South Haven	252A
Spring Arbor	295A
St. Ignace	275C
St. Johns	221A
St. Joseph	296A
Standish	245A
Stephenson	272A
Sturgis	257A
Tawas City	284C2, 297A
Three Rivers	240A
Traverse City	270C1, 278C, 298C2
Tuscola	269A
Vassar	255A
Walker	263A
West Branch	288A
Whitehall	237A, 273A
Zeeland	257A

MINNESOTA

	Channel No.
Ada	292A
Aitkin	232C3
Albany	288A
Albert Lea	235C2, 241A
Alexandria	222C2, 257A, 264C
Anoka	300C
Atwater	231A
Austin	260C1
Babbitt	294A
Bemidji	268C1, 279C1
Benson	228A

MINNESOTA—Continued

	Channel No.
Blackduck	252C2
Blooming Prairie	265A
Blue Earth	251C3, 283C2
Brainerd	294C1, 298C1
Breckenridge	286C1
Breezy Point	282 C2
Browerville	259A
Caledonia	234A
Cambridge	287C3
Cloquet	243A, 263C1
Crookston	241C1, 246C1
Deer River	288A
Detroit Lakes	236C
Duluth	225C1, 235C, 239C1, *247C2, 255C2, 269A, 277C1, 286C1
East Grand Forks	282C1
Eden Prairie	289A
Ely	221A
Eveleth	250C1
Fairmont	293C1
Faribault	240A, 298C2
Fergus Falls	243C1, 277C1
Forest Lake	240A
Fosston	296C3
Glenwood	296A
Golden Valley	223C
Grand Marais	237C
Grand Rapids	245C1
Granite Falls	230A
Hibbing	230C1, 292C3
Hutchinson	296A
International Falls	258C1, 281C
Jackson	287A
La Crescent	274A
Lakeville	286A
Le Sueur	241A
Litchfield	235C2
Little Falls	221A, 231A
Luverne	266C
Madison	221A
Mankato	256C1, 278C1
Marshall	259C1, 296A
Minneapolis	229C, 246C, 253C, 258C, 262C1, 275C
Montevideo	288A
Moorhead	254C1, 260C
Mora	237A
Morris	239C1
New Prague	238A
New Ulm	226C1
Nisswa	227C
North Mankato	244A
Olivia	269A
Ortonville	268C, 292A
Osakis	280A
Owatonna	285A
Park Rapids	248C1
Paynesville	255C2
Pelican Rapids	281C2
Pequot Lakes	261A
Pine City	221A
Pipestone	254C1
Preston	276A
Princeton	292A
Red Wing	290A, 290C2
Redwood Falls	249C1
Richfield	267C
Rochester	243C2, 248C, 269C2, 295C
Roseau	271 C2
Rushford	257A
Sartell	244C2
Sauk Centre	232A
Sauk Rapids	269A
Slayton	276A
Sleepy Eye	297A
Spring Grove	252C2
Spring Valley	282A
Springfield	289A
St. Cloud	251C, 284C
St. James	263C2, 285A
St. Louis Park	281C
St. Paul	233C, 237A, 271C
St. Peter	288A
Staples	234A
Stewartville	287C2
Thief River Falls	257A, 262C1, 274C1
Tracy	286A
Two Harbors	282C2
Virginia	260C1
Wabasha	273A
Wadena	290C1
Waite Park	279C3
Walker	256C2
Warroad	223C1
Waseca	221A
Willmar	273C
Windom	232A
Winona	237C3, 266A
Worthington	228A, 236C1

MISSISSIPPI

	Channel No.
Aberdeen	287C3
Ackerman	300C
Amory	237A
Artesia	261A
Baldwin	240A
Batesville	263C2
Bay Springs	228A
Belzoni	225A, 296A
Biloxi	229C
Booneville	257A
Brandon	249A
Brookhaven	221A
Bruce	235A
Calhoun City	272A
Canton	269A
Carthage	252A
Centreville	285A
Charleston	239A
Clarksdale	243C3, 269A, 292A
Cleveland	224A, 280A, 295A
Clinton	228A
Coldwater	237A
Collins	269A
Columbia	244A
Columbus	235C2, 276C2, 280C2
Corinth	232A, 237A
Drew	237A
Ellisville	273C2
Ebenezer	280A
Eupora	241C2

MISSISSIPPI—Continued

	Channel No.
Fayette	249A
Flora	248A
Forest	223C
Fulton	270C2
Gluckstadt	269A
Greenville	250C2, 264C1, 284C2
Greenwood	230A, 258C, 282C3
Grenada	261A
Gulfport	244A, 272C3, 296A
Hattiesburg	221A, 279C, 283C
Hazlehurst	265C3
Heidelberg	257C2
Holly Springs	224A, 235A
Houston	227C
Indianola	245A, 288A
Iuka	285C2
Jackson	234C, 238C, 242C, 259C, 275C
Kosciusko	277C3, 286C1
Laurel	251A, 262C
Leland	232A, 272A
Lexington	273C3, 290C3
Long Beach	233A
Louisville	296A
Lucedale	295A
Lumberton	237C2
Macon	263A
Magee	230A, 298C
Marion	236C2
McComb	231C1, 289C
Meridian	246C, 267C, 271A
Monticello	271C2
Moss Point	285C2
Mound Bayou	271A
Natchez	236C, 247A
New Albany	278C, 294C2
Newton	292A
Ocean Springs	223A, 276C2
Olive Brance	239A
Oxford	238A, 248C1, 296A
Pascagoula	256C1, 290C3
Petal	292A
Philadelphia	272A
Picayune	291C2
Pontotoc	244A
Poplarville	300C
Port Gibson	263A
Prentiss	252A
Quitman	255A
Richton	243A
Ripley	272A
Starkville	221A, 291C2
State College	282A
Taylorsvi[illegible]	240C2
Tupelo	253C
Tylertown	249A
Union	281C2
University	221A
Utica	225A
Vicksburg	254C, 266A, 294C
Water Valley	268A
Waynesboro	286A
West Point	265A
Wiggins	250A
Winona	244A
Woodville	240A
Yazoo City	221C2, 229A

EFFFECTIVE DATE NOTE: At 55 FR 35146, August 28, 1990, Lumberton was amended by removing Channel 237A and adding Channel 237C2, effective October 10, 1990.

MISSOURI

	Channel N
Ashland	291C2
Aurora	263C2
Ava	222A
Bethany	238C2
Birch Tree	296A
Bolivar	290C2
Bonne Terre	282A
Boonville	257C2
Bowling Green	231A
Branson	292A
Brookfield	245C2
Buffalo	260A
Butler	221A
Cabool	251A
California	232A
Cameron	222A
Campbell	298A
Canton	272C3
Cape Girardeau	264C, 275B
Carrollton	264C1
Carthage	236C2
Caruthersville	276A
Cassville	261A
Centralia	221A
Chaffee	284A
Charleston	291A
Chillicothe	280A
Clayton	256C
Clinton	237A, 241C
Columbia	230A, 244A, 252 268C2
Crestwood	234C
Cuba	271A
De Soto	261A
Dexter	272A
Doniphan	248C2
East Prairie	287A
Eldon	224C2, 270A
Eldorado Springs	288A
Ellington	280A
Farmington	253C
Florissant	246C1
Fulton	263A
Gainesville	259C2
Gordonville	257A
Greenfield	228A
Halfway	226A
Hannibal	225C1
Harrisonville	266C1
Houston	257A
Huntsville	223A
Ironton	224A
Jefferson City	261C2, 295C
Joplin	223C1, 273C
Kansas City	227C, 235C, 240C, 259C, 271C, 27 282C
Kennett	255C
Kirksville	229C2, 233C, 29 300C1
Knob Noster	288A
Lamar	260A
La Monte	246A
Lebanon	279C, 300C2
Lexington	297C
Liberty	293C1
Louisiana	271A
Lutesville	281A
Macon	260A
Malden	224A

Missouri—Continued

	Channel No.
Mansfield	240A
Marshall	275C1
Marshfield	284C2
Maryville	257A
Memphis	244A
Mexico	239C
Moberly	284C, 288A
Monett	240A
Monroe City	292A
Montgomery City	280A
Mount Vernon	294C3
Mountain Grove	293A
Mountain View	245C2
Nevada	249A
Osage Beach	228A
Osceola	222A
Owensville	237C2
Ozark	225A
Palmyra	250C2
Perryville	226A
Piedmont	285A
Pleasant Hope	238C2
Poplar Bluff	233C, 238C1, 244A, 278C2
Portageville	292A
Potosi	249A
Republic	258A
Richmond	223A
Rolla	232A, 287C1
Saint Robert	243A
Salem	240A
Savannah	224C2
Sedalia	221A
Seligman	227C2
Sikeston	249A
Southwest City	262A
Sparta	243A
Springfield	234C, 247C, 254C, 267C
St. Genevieve	289C
St. James	259C3
St. Joseph	286C
St. Louis	222C, 229C, 242C1, 251C, 273C, 277C1, 299C
Steelville	227C2
Sullivan	265A
Tarkio	228A
Thayer	257A
Trenton	221A
Troy	264A
Union	269A
Vandalia	282A
Versailles	236A
Warrenton	260A
Warsaw	229A, 249A
Washington	283A
Waynesville	249A, 272A
Webb City	230C2, 250A
West Plains	230C1, 273C2
Wheeling	289A
Willard	286C2
Willow Springs	262C2

Efffective Date Note: At 55 FR 38551, September 19, 1990, St. James was amended by removing Channel 258A and adding Channel 259C3, effective October 29, 1990.

Montana

	Channel No.
Anaconda	249C3
Baker	263C1
Belgrade	244C3
Billings	227C1, 231C, 246C1, 253C1, 275C1, 279C1
Bozeman	229C1, 236C1, 260C1, *271C2
Butte	224A, 231C, 238C
Chinook	267C1
Columbia Falls	240A
Conrad	229A
Cut Bank	274C1
Deer Lodge	244A
Dillon	252C3
East Helena	281C
Ennis	254C2
Forsyth	267C
Glasgow	228A
Glendive	243C1
Great Falls	225C1, 233C1, 255C1, 262C, 291C, 297C
Hamilton	240C3
Hardin	238C
Havre	223C, 236C
Helena	258C1, 266C, *276C, 287C
Kalispell	246C, 253C, 280C1
Lewistown	240A
Libby	269C3
Livingston	248C1
Malta	261C3
Miles City	223C
Missoula	227C, 235C, 261C3, 273C1
Outlook	289C
Plentywood	261A
Red Lodge	257C
Ronan	222C
Scobey	239C1
Shelby	242C1, 250C
Sidney	226C1, 236C1
West Yellowstone	243A
Wolf Point	224A

Efffective Date Note: At 55 FR 36279, September 5, 1990, Helena was amended by adding Channel *276C, effective October 15, 1990.

Nebraska

	Channel No.
Ainsworth	224A
Albion	224A
Alliance	271C1, 290C1
Auburn	288A
Aurora	247C2
Beatrice	225C1
Bennington	227A
Blair	292A
Bridgeport	267C
Broken Bow	252A
Central City	262C
Chadron	234C, 248C1
Columbus	228C1, 266C1
Cozad	283C1
Crete	280A
Crookston	241C
Fairbury	257C1

NEBRASKA—Continued

	Channel No.
Falls City	267A
Fremont	288A
Gordon	238C2
Grand Island	239C1, 243C, 299C1
Hastings	251C, 268C2
Holdrege	249A
Imperial	276A
Kearney	255C1, 272C3, 290C
Kimball	261A
Lexington	226C1
Lincoln	236C2, 270C, 274C, 287A, 292A, 297C1
McCook	230C2, 241C, 253C2, 287C1
Nebraska City	249C2
Norfolk	234C, 294C
North Platte	235C, 246C1, 278C
O'Neil	275C1
Ogallala	259C1, 293C1
Omaha	222C, 231C, 241C, 260C, 264C, 283C, 290A
Orchard	287C1
Ord	280C3
Plattsmouth	293A
Sargent	221C1
Scottsbluff	225C, 231C1
Seward	245C
Sidney	254C1
South Sioux City	296A
Superior	280A
Terrytown	245C1
Wayne	285A
West Point	300C1
Winnebago	289C2
York	285C3

EFFFECTIVE DATE NOTE: At 55 FR 35145, August 28, 1990, Falls City was amended by removing Channel 237A and adding Channel 267A, effective October 10, 1990.

NEVADA

	Channel No.
Boulder City	288C2
Carson City	234C, 247C, 251C
Elko	229C2, 237C
Ely	224C3, 269C3
Fallon	257A
Gardnerville-Minden	257A
Hawthorne	228A
Henderson	231C, 238C, 263C
Incline Village	261C2
Indian Springs	257A
Las Vegas	222C, 226C, 242C, 246C, 253C, 270C, 278C, 286C2, 293C
Laughlin	228C
Mesquite	248C1
North Las Vegas	282C
Pahrump	298C
Reno	225C, 238C, 269A, 283C, 289C, 295C
Sparks	221A, 265A
Tonopah	224A
Wendover	272C
Winnemucca	224C3

NEW HAMPSHIRE

	Channel N
Bedford	243A
Belmont	227A
Berlin	279C
Campton	289A
Claremont	291B
Concord	272A, 288A
Conway	228A, 283A
Dover	248B
Exeter	296A
Farmington	293A
Franklin	231A
Gorham	296A
Hampton	271A
Hanover	222A, 257A
Haverhill	267A
Henniker	256A
Hillsboro	299A
Hinsdale	285A
Jackson	258A
Keene	279B
Laconia	252A
Lancaster	272A
Lebanon	263A
Lisbon	244A
Littleton	292A
Manchester	239B, 266B
Meredith	268A
Moultonborough	295A
Mount Washington	235C
Nashua	292A
Newport	269A
Peterborough	221A
Plymouth	261A
Portsmouth	262B
Rochester	244A
Somersworth	254A
Walpole	242A
Winchester	254A
Wolfeboro	285A

NEW JERSEY

	Channel No
Asbury Park	232A
Atlantic City	236B, 245B, 27 297B1
Avalon	232A
Blairstown	292A
Bridgeton	299B
Camden	295B
Canton	269A
Cape May	272A
Cape May Court House	288A
Dover	288A
Eatontown	292A
Egg Harbor	285B1
Franklin	272A
Long Branch	296A
Manahawkin	261A, 289B1
Margate City	241A
Millville	247B
New Brunswick	252A
Newark	234B, 262B, 290B1
Newton	279B
North Cape May	294A
Ocean Acres	253A
Ocean City	252A, 292A

NEW JERSEY—Continued

	Channel No.
Paterson	226B
Petersburg	274A
Pleasantville	257A
Point Pleasant	240A
Princeton	277B
Toms River	224A
Trenton	233B, 248B, 268B
Tuckerton	259A
Villas	254A
Vineland	221A
Wildwood	264B
Wildwood Crest	226A
Zarephath	256B

NEW MEXICO

	Channel No
Alamogordo	232A, 279C1, 287C2
Albuquerque	222C, 227C, 231C, 242C, 258C, 262C, 267A, 277C, 300C
Angel Fire	256C2
Armijo	296C2
Artesia	225C
Aztec	235C1
Bayard	275C1
Belen	249C
Bloomfield	283C
Carlsbad	221A, 281C, 291C2
Central	237C2
Clayton	228A
Clovis	256C1, 260C1, 268C, 298C1
Corrales	236A
Deming	232A
Espanola	272A
Eunice	265A
Farmington	225C1, 239C1, 245C, 271C
Gallup	229C, 233C, 256C, 291C2
Grants	265C2, 279C, 288C
Hatch	266C
Hobbs	231C1, 239C2, 275C
Jal	296A
La Luz	224A
Las Cruces	258C, 276A, 280A
Las Vegas	251C, 264C2
Lordsburg	250C
Los Alamos	253C, 294C1
Los Lunas	273C2, 292A
Lovington	269A
Maljamar	*254C1, 288C
Mesilla Park	285A
Portales	237A
Raton	232A
Rio Rancho	269A
Roswell	235C, 246C1, *259A, 263C, 284C2, 293C
Ruidoso	228A
Santa Fe	234C, 238C1, 247C, 281C, 286C, 290C
Santa Rosa	240A
Silver City	233A
Socorro	284C
Taos	260C2, 268C2
Texico	243A

NEW MEXICO—Continued

	Channel No
Thoreau	260C
Truth or Consequences	254C
Tucumcari	224A
White Rock	266C2

NEW YORK

	Channel No.
Albany	238B, 265A, 276A, 293B, 299B
Amsterdam	249A
Arlington	245A
Attica	269A
Auburn	295B
Avon	227A
Babylon	272A
Baldwinsville	221B1
Bath	252A, 276A
Bay Shore	276A
Big Flats	249A
Binghamton	251B, 256B
Boonville	267A
Briarcliff Manor	296A
Bridgeport	258A
Buffalo	225B, 233B, 241B, 245B, 258B, 273B, 277B, 281B, 293B
Canajoharie	227A
Canandaigua	272A
Canton	268A
Cape Vincent	234A, 274A
Carthage	276A
Catskill	253A
Center Moriches	241A
Chateaugay	234A
Cherry Valley	270B
Clifton Park	244A
Clyde	229A
Cobleskill	278B
Conklin	263A
Copenhagen	293A
Corinth	228A
Corning	254A, 291B
Cortland	260B
Dansville	230A
Delhi	262A
Depew	229B
Deposit	234A
Deruyter	286B
Dundee	240A
East Hampton	244A
Ellenville	257A
Elmira	224A, 232A
Endicott	289B
Endwell	298A
Essex	267A
Port Plain	266A
Frankfort	235B
Fredonia	243A
Fulton	284B
Garden City	224A
Geneva	269A
Glens Falls	240A
Gouverneur	237A
Hammondsport	252A
Hampton Bays	296A
Hempstead	252A

NEW YORK—Continued

	Channel No.
Henderson	264A
Herkimer	224A
Highland	297A
Homer	268A
Honeoye Falls	297A
Hoosick Falls	248A
Hornell	221A, 287B
Horseheads	265A
Hudson	228A
Hudson Falls	269A, 296A
Hyde Park	249A
Irondequoit	294A
Ithaca	228A, 247B, 279B
Jamestown	227B, 269A
Jeffersonville	291A
Johnstown	285A
Kingston	232A
Lake Luzerne	234A
Lake Placid	288A
Lake Success	278B
Liberty	240A
Little Falls	288A
Lowville	257A
Malone	243A
Manlius	237A
Mechanicville	283A
Middletown	224A
Montauk	235A, 284A
Monticello	252A
Montour Falls	285A
Mount Kisco	292A
New Paltz	277A
New Rochelle	228A
New York	222B, 230B, 238B, 242B, 246B, 250B, 254B, 258B, 266B, 270B, 274B, 282B, 286B, 294B, 298B
Newburgh	276A
Niagara Falls	253B
North Syracuse	265A
Norwich	230B
Ogdensburg	224A, 254A
Old Forge	231A, 259A
Olean	239B, 265A
Oneonta	276A, 280A
Oneida	292A
Oswego	244A, 288A
Owego	269A
Palmyra	259A
Patchogue	248B, 291B
Patterson	288A
Peekskill	264B
Phoenix	271A
Plattsburgh	260C, 286A
Port Henry	221A
Port Jervis	244A
Potsdam	257A
Poughkeepsie	221A, 241A, 268B, 284B
Pulaski	269A
Queensbury	289B1
Ravena	233A
Remsen	228A
Rensselaer	280A
Riverhead	280A
Rochester	223B, 243B, 250B, 255B, 263B, 267B, 280A, 290A
Rome	240A, 273B

NEW YORK—Continued

	Channe
Rotterdam	252A
Sag Harbor	221A
Salamanca	252A
Saranac Lake	269A
Saratoga Springs	272A
Schenectady	258B
Seneca Falls	257A
Sidney	265A
Smithtown	232A
Sodus	278A
South Bristol Twsp	236B
Southampton	237A
Southhold	269A
Southport	258A
Star Lake	290B1
Stillwater	267A
Syracuse	226B, 233B, 290A, 300
Ticonderoga	280A
Troy	222B
Tupper Lake	272A
Utica	245B, 254B, 282B, 297
Vestal	277B1
Walton	221A
Warrensburg	263A
Waterloo	253A
Watertown	228A, 248C
Waverly	272A
Webster	274A
Wellsville	228A
Wethersfield Townsh	299B
White Plains	280A
Whitehall	231A
Woodstock	261A
Wurtsboro	247A

NORTH CAROLINA

	Channel
Ahoskie	257A
Albemarle	265A
Asheboro	222C
Ashville	260C
Atlantic	297A
Banner Elk	264A
Bayboro	250A
Belhaven	266C2
Biltmore Forest	243A
Black Mountain	295C
Burgaw	260C
Burlington	230C, 266C
Charlotte	236C, 279C, 300C
Clinton	296A
Columbia	289C
Concord	250C
Dunn	278C2
Durham	286C, 296A
Eden	233C1
Edenton	261C2, 272A
Elizabeth City	229C, 244A
Elizabethtown	289A
Elkin	265A
Fairbluff	287A
Fairmont	265A
Farmville	232A

NORTH CAROLINA—Continued

	Channel No.
Fayetteville	251C1
Forest City	227C
Franklin	244A
Fuquay-Varina	280A
Gaston	250A
Gastonia	270C
Goldsboro	245C, 272A
Greensboro	246C, 254C
Greenville	300C
Grifton	258C2
Hamlet	282A
Hatteras	246C1
Havelock	285A
Henderson	223C
Hendersonville	273C1
Hertford	285A
Hickory	239C, 275C1
Highlands	283A
High Point	238C1, 258C, 262C
Hope Mills	283A
Jacksonville	222C2, 254C1, 288A
Kannapolis	259C
Kill Devil Hills	281C1
Kinston	236C, 249A, 275A
Laurinburg	243C
Leland	231A
Lenoir	277A
Lexington	231C
Louisburg	273A
Lumberton	239C, 272A
Manteo	252A, 256C2
Morehead City	242C2
Morganton	221A
Moyock	221B1
Murfreesboro	252A
Murphy	274A
Nags Head	222A
New Bern	232A, 270C1, 293C1
Newport	277C1
North Wilkesboro	247C
Old Fort	282A
Plymouth	240A
Raleigh	234C, 241C, 268C, 275A
Reidsville	271C
Roanoke Rapids	272A
Robbinsville	240A
Rocky Mount	221A, 253A, 264C
Rose Hill	284A
Roxboro	244A
St. Pauls	295A
Salisbury	293C
Sanford	288A
Scotland Neck	274A
Semora	294A
Shallottee	228A, 292A
Shelby	241C
Southern Pines	273A, 296A
Southport	298C2
Statesville	245C, 289C
Tabor City	285A
Tarboro	282C1
Thomasville	252A
Topsail Beach	280A
Wadesboro	228C3
Wallace	232A
Wanchese	237A
Warrenton	297C2
Washington	227C, 252A
Waynesville	285A

NORTH CAROLINA—Continued

	Channel No.
Whiteville	256C1
Williamston	279C1
Wilmington	247C, 267C2, 274C1, 287A
Wilson	291C
Windsor	249A, 255A
Winston-Salem	226C, 281C, 298C
Wrightsville Beach	229A

NORTH DAKOTA

	Channel No.
Beulah	250A
Bismarck	225C, 233C, 243C, 254C
Bottineau	270C1
Carrington	252A
Devils Lake	244A, 273C1, 278C1
Dickinson	221C3
Fargo	229C, 250C1, 270C, 300C
Grafton	265C3
Grand Forks	225C1, 234C1, 298C1
Hettinger	228A
Jamestown	227C1, 238C1
Langdon	239A
Lisbon	291C2
Mandan	284C1
Mayville	288C3
Minot	229C1, 246C, 260C1, 287C1, 295A
Oakes	223C1
Rugby	237A
Sarles	290C
Tioga	280A
Valley City	265C3
Wahpeton	295C2
Williston	241C1, 253C1, 266C1
Wishek	262C

OHIO

	Channel No.
Ada	235A
Akron	243B, 248B
Alliance	223B
Archbold	241A
Ashland	267B
Ashtabula	246B, 252A
Athens	289B1
Barnesville	228A
Beavercreek	280A
Bellaire	263A
Bellefontaine	252A
Bellevue	221A
Belpre	296A
Bowling Green	228A
Bryan	265A
Bucyrus	224A
Byesville	249A
Cadiz	292A
Caldwell	285A
Cambridge	244A
Canton	231B, 251B, 295B

OHIO—Continued

	Channel No
Castalia	249A
Celina	232A, 244A
Chillicothe	227B, 232B1
Cincinnati	223B, 227B, 231B, 253B, 270B, 274B, 286B
Circleville	296A
Cleveland	226B, 238B, 253B, 258B, 264B, 271B, 277B, 281B, 289B, 293B 300B
Cleveland Heights	222B
Clyde	265A
Coal Grove	246A
Columbus	222B, 234B, 242B, 246B, 250B, 259B, 298A
Conneaut	288A
Coshocton	257A
Crestline	254A
Crooksville	297A
Dayton	256B, 284B, 299B
Defiance	251B, 290A
Delaware	300A
Delphos	296A
Delta	293A
Dover	269A
East Liverpool	282B
Eaton	225B
Edgewood	273A
Elyria	297B
Englewood	233A
Fairfield	235B
Findlay	263B
Fort Shawnee	298A
Fostoria	244A
Fredericktown	252A
Fremont	256B1
Gahanna	285A
Galion	272A
Gallipolis	268B
Geneva	285A
Georgetown	249A
Gibsonburg	239A
Greenfield	248A
Greenville	293B
Grove City	266A
Hamilton	243B, 278B
Harrison	282A
Hillsboro	294B
Holland	272A
Hubbard	270A
Huron	241A
Ironton	296A
Jackson	249A
Johnstown	276A
Kent	261A
Kenton	237A
Kettering	260B
Lancaster	238B, 278A
Lebanon	247A
Lima	226A, 249A, 271B, 285A
Logan	252A
London	292A
Lorain	285A
Loudonville	299A
Manchester	267A
Mansfield	287B, 291B
Marietta	271B1

OHIO—Continued

	Channel N
Marion	232A, 295B
Marysville	289A
McArthur	254A
McConnelsville	265A
Medina	235B
Miamisburg	229B
Middleport	221A
Middletown	290B
Milford	296A
Millersburg	237A
Montpelier	283A
Mount Gilead	236
Mount Vernon	229B
Napoleon	276A
Nelsonville	299A
New Lexington	292A
New Philadelphia	240A
Newark	262B, 269A
Niles	291A
North Baltimore	299A
Norwalk	237A
Oak Harbor	247A
Ottawa	292A
Oxford	249A
Paulding	259A
Piqua	239B
Port Clinton	233B
Portsmouth	257A, 281C
Ripley	258A
St. Marys	277A
Salem	286B
Sandusky	274B
Shadyside	239B1
Shelby	261A
Sidney	288A
South Webster	235A
Springfield	264B, 275B
Steubenville	278B
Swanton	297A
Sylvania	288A
Tiffin	279B
Toledo	223B, 260B, 268B 284B
Troy	245A
Uhrichsville	260A
Union City	248A
Upper Arlington	255A
Upper Sandusky	240A
Urbana	269A
Van Wert	255B
Wapakoneta	221A
Washington Courthouse	288A
Wauseon	245A
Waverly	265A
Wellston	244B1
West Carrollton	221A
West Union	276A
Westerville	280A
Willard	245A
Wilmington	272A
Wooster	283B
Xenia	237A
Youngstown	227B, 255B, 266B
Zanesville	224A, 273B

OKLAHOMA

	Channel No.
Ada	227C1, 244A
Altus	228C2, 300A
Alva	259C1, 284C1, 289C2
Anadarko	279C
Antlers	281A
Ardmore	239C1
Atoka	276C2
Bartlesville	261A
Bethany	285A
Bixby	287A
Bristow	285A
Broken Arrow	221C2
Broken Bow	291C2
Byng	261C2
Chickasha	288A
Claremore	264A
Clinton	238C2, 295C1
Comanche	245C2
Commerce	259A
Cordell	229A, 257A
Duncan	272A
Durant	248C2, 296C2
Edmond	249A
Eldorado	232A
Elk City	232A, 243C1, 253C
Enid	245C, 276C3
Eufaula	272A
Frederick	240A
Grove	257A
Guymon	224C3
Healdton	289C2
Heavener	223A
Henryetta	258C1
Hobart	290C
Holdenville	293A
Hollis	223A
Hugo	238C2
Idabel	244C3
Ketchum	298C2
Lahoma	239A
Lawton	232A, 237A, 251C1, 258C2, 268C1, 297C2
Lindsay	286A
Locust Grove	233A
Lone Grove	294A
Madill	272A
Mangum	249A
Marlow	221C1
McAlester	267C1, 285A
Miami	265A
Muskogee	246C, 295C
Norman	292A
Nowata	232A, 268A
Oklahoma City	223C, 234C, 241C, 255C, 263C, 270C, 274C, 281C, 299C
Okmulgee	231C2
Owasso	291C
Pauls Valley	249A
Pawhuska	285A
Perry	286A
Ponca City	257A, 261A, 265A
Poteau	250C, 297C
Pryor	283C1
Roland	222A
Sallisaw	240C2
Sand Springs	272A
Sapulpa	265A
Seminole	288A

OKLAHOMA—Continued

	Channel No.
Shawnee	236C
Snyder	262A
Spencer	289A
Stillwater	229C2, 288A
Sulphur	265C3
Taft	262A
Tahlequah	269A
Tishomingo	292A
Tulsa	225C, 238C, 243C, 248C, 253C, 277C
Vinita	240A, 241C2
Wagoner	271A
Watonga	228A
Weatherford	247C1
Wilburton	279A
Woodward	221C3, 228A, 240A, 266C, 272A

Efffective Date Note: At 55 FR 38552, September 19, 1990, Durant was amended by removing Channel 296A and adding Channel 296C2, effective October 29, 1990.

OREGON

	Channel No.
Albany	260C, 300C
Altamont	267C
Ashland	270C
Astoria	225C1
Baker	237C3, 284C
Banks	298A
Beaverton	277C
Bend	231C, 248C1, 252C3, 264C1, 289C2
Brookings	237C3
Brownsville	272A
Burns	224A
Cave Junction	274C
Coos Bay	254C2, 290C2
Coquille	247C1
Corvallis	268C, 292C
Creswell	237A
Enterprise	221A
Eugene	233C, 241C, 250C, 256C
Florence	284C
Gleneden Beach	248C2
Gold Beach	224C1
Gold Hill	262C1
Grants Pass	245C
Harbeck-Fruitdale	252A
Hermiston	257A
Hood River	288A
Klamath Falls	223C, 258C, 295C1
La Grande	254C2, 261A
Lake Oswego	294C
Lakeview	228C3
Lebanon	279C1
Lincoln City	244C2
Medford	229C, 239C1, 278C
Milton-Freewater	250C3
Myrtle Point	231A
Newport	274C1
North Bend	235C1, 297C1
Nyssa	254A
Oakridge	221A
Ontario	241C1
Pendleton	278C1, 299C
Phoenix	286C1

OREGON—Continued

	Channel No.
Portland	222C, 229C, 238C, 246C, 253C, 258C1, 262C, 266C, 270C
Prineville	236C1
Redmond	275C, 298C1
Reedsport	221A
Roseburg	276A
Salem	266C
Seaside	234A
Sisters	281A
Springfield-Eugene	226C
Sutherlin	266A
Sweet Home	296C2
The Dalles	249C2, 283C
Tillamook	281C2
Toledo	264A
Tri-City	282C2
Warm Springs	243C

PENNSYLVANIA

	Channel No.
Allentown	264B, 281B
Altoona	251B, 261B1
Avis	260A
Barnesboro	223A
Beaver Falls	294B
Beaver Springs	291A
Bedford	265A, 298A
Bellefonte	237A
Bellwood	280A
Benton	240A
Berwick	278A
Bethlehem	236B
Blairsville	292A
Bloomsburg	293B
Boalsburg	225A
Boyertown	298B
Braddock	245B
Bradford	261A
Brookville	240A
Burnham	244A
Butler	249A
Canton	262B1
Carbondale	232A
Carlisle	272A
Central City	269A
Chambersburg	236B
Charleroi	252A
Clarion	224A
Clearfield	230B1
Coudersport	244A
Covington	268A
Cresson	232A
Curwensville	275A
Dallas	229A
Danville	244A
Dubois	271B, 297B
Easton	241B, 260B
Ebensburg	256B
Edinboro	250A
Elizabethville	263A
Ellwood City	221A
Emporium	257A
Ephrata	266B
Erie	234A, 260B, 272A, 279B

PENNSYLVANIA—Continued

	Channel No.
Everett	282A
Franklin	257B1
Freeland	276A
Galeton	264B1
Gettysburg	299B
Greencastle	232A
Greensburg	296A
Greenville	296A
Grove City	236B
Harrisburg	235B, 247B, 281B
Hawley	287A
Hazleton	250B
Hershey	294B
Hollidaysburg	285A
Honesdale	237A
Huntingdon	278A, 292A
Indiana	276A
Jenkintown	280A
Jersey Shore	228A, 249A
Johnsonburg	277A
Johnstown	221A, 236B,
Kane	280A
Lancaster	233B, 245B,
Lebanon	261A
Lewisburg	242A
Lewistown	240A, 288A
Linesville	269A
Lock Haven	221A
Mansfield	222A
Martinsburg	224A
Masontown	295A
McConnellsburg	279A
Meadville	262B
Mechanicsburg	228A
Media	262B
Mercer	244A, 280A
Mercersburg	221A
Mexico	223A
Meyersdale	227A
Mifflinburg	252A
Mifflintown	296A
Millersburg	255A
Milton	265A
Montrose	243B
Mountaintop	246A
Mount Carmel	259A
Mount Union	258A
Muncy	280A
Nanticoke	221A
New Kensington	264B
North East	265A
Northumberland	297A
Oil City	253B1
Oliver	235A
Olyphant	239A
Palmyra	221A
Patton	234A
Philadelphia	223B, 227B, 239B, 243B, 255B, 266B, 275B, 283B, 291B
Philipsburg	290A
Pittsburgh	225B, 229B, 241B, 259B, 273B, 284B, 300B
Pittston	272A
Portage	269A

PENNSYLVANIA—Continued

	Channel No.
Port Allegany	235A
Port Matilda	300A
Pottsville	270B
Punxsutawney	288A
Reading	273B
Red Lion	241B
Renovo	226A
Reynoldsville	258A
Ridgebury	245A
Riverside	222A
Russell	276A
Saegertown	232A
Salladasburg	238A
Scottdale	280A
Scranton	258, 267B, 285A, 296A
Shamokin	237A
Sharon	275B
Sharpsville	240A
Smethport	292A
Somerset	249A
South Williamsport	257A
Spangler	247A
St. Marys	232A, 248B
Starview	224A
State College	233A, 276A
Stroudsburg	228A
Sunbury	231B
Susquehanna	223A
Tamaqua	288A
Tioga	227A
Tobyhanna	300A
Towanda	237A
Tunkhannock	299A
Tyrone	266B
Union City	292A
Uniontown	257A
University Park	246A
Warren	222B
Washington	237A
Waynesboro	268B
Waynesburg	276A
Wellsboro	283B
Whitneyville	296A
Wilkes-Barre	225B, 253B
Williamsport	274B, 286B, 300A
York	277B, 289B
York-Hanover	253B

RHODE ISLAND

	Channel No.
Block Island	257A
Middletown	262A
Narragansett Pier	274A
Providence	222B, 231B, 238B, 268B, 286B
Wakefield-Peacedale	259A
Westerly	279B
Woonsocket	292A

SOUTH CAROLINA

	Channel No.
Abbeville	225A
Aiken	242C2, 258C2
Allendale	228A
Anderson	266C, 297C
Andrews	265A
Bamberg	221A
Barnwell	256A
Batesburg	237A
Beaufort	254C1
Bishopville	229A
Blackville	250A
Bluffton	295C2
Camden	232A
Cayce	244A
Charleston	236C, 245C, 264A, 278C
Cheraw	277C2
Chester	257A
Clearwater	252A
Clemson	285A
Columbia	228A, 248C1, 276A, 284C
Conway	230A, 281C1
Darlington	288A
Dillon	225C
Easley	280A
Elloree	262A
Florence	292A
Folly Beach	251C2
Gaffney	287C
Georgetown	229A, 249C2, 293C2
Goose Creek	232A
Gray Court	263C
Greenville	223C, 229C, 233C
Greenwood	244A, 278A
Greer	277A
Hampton	276A
Hanahan	241C
Hardeeville	266C2
Hartsville	253A
Hilton Head Island	291C2, 300C2
Honea Path	276A
Johnsonville	286A
Johnston	224A
Kershaw	291A
Kingstree	231A, 252A
Lake City	261A
Lancaster	296A
Lexington	253A
Loris	290A
Manning	223C
Marion	232A, 263A
McClellanville	255C2
Moncks Corner	268A
Mount Pleasant	283C2
Mullins	296A
Murrell's Inlet	233A
Myrtle Beach	221C2, 269C2
New Ellenton	274A
Newberry	292C3
North Charleston	273C
North Myrtle Beach	288A
Orangeburg	275A, 280C3, 294C1
Pageland	272A
Pamplico	271A
Parris Island	221A
Pawley's Island	262A
Port Royal	259C
Ravenel	269C2
Ridgeland	285A

SOUTH CAROLINA—Continued

	Channel No.
St. Andrews	272A
St. George	298C
St. Matthews	230A
St. Stephen	290A
Saluda	221A
Scranton	275A
Seneca	251C
Spartanburg	255C
Summerville	228A
Sumter	234A, 267C
Surfside Beach	276A
Walhalla	242A
Walterboro	265A, 287A
Wedgefield	257A
West Columbia	261A
Williston	234A

SOUTH DAKOTA

	Channel No.
Aberdeen	231C1, 235C, 294C1
Belle Fourche	240A
Brookings	229C2
Canton	273A
Custer	286C2
Deadwood	236C
Faith	246C
Gregory	268C1
Hot Springs	244C1
Huron	256C1, 286A
Lowry	264C
Madison	276A
Martin	273C1
Milbank	282C1
Mission	264A
Mitchell	290C1, 297C1
Mobridge	258C1
Pierre	224C3, 237A
Pine Ridge	228A
Rapid City	230C1, 250C1, 254C1, 262C1, 281C1
Redfield	249A, 279C
Reliance	233C
Salem	263C1
Sioux Falls	223C, 243C, 247C1, 252A, 270C2, 279C2, 284C
Sisseton	257A, 275C1
Spearfish	266C, 297C
Sturgis	226C
Vermillion	292A
Volga	272A
Watertown	225C1, 241C1, 245C
Winner	229C1, 253C1
Yankton	226C1, 281C1

TENNESSEE

	Channel No.
Alamo	226C3
Athens	269A
Bolivar	234A, 244A
Bristol	245C
Brownsville	237A

TENNESSEE—Continued

	Channel No.
Calhoun	281A
Camden	252A
Carthage	272A
Celina	229A, 268A
Centerville	244A
Chattanooga	222C, 243C, 290C
Cleveland	237A, 264C
Clinton	237A
Coalmont	284A
Colonial Heights	290A
Columbia	269A
Cookeville	234C, 253C2
Covington	228A
Crossville	257A, 273A
Dayton	285A
Dickson	229A, 273C1
Dresden	236A
Dyersburg	261C2
East Ridge	300A
Elizabethton	257C3
Erwin	280A
Etowah	276C2
Fayetteville	288A
Franklin	261A
Gallatin	283C1
Gatlinburg	288A
Germantown	231C2, 298A
Goddlettsville	246C2
Graysville	239A
Greensville	235C
Harriman	224A
Harrogate	243A
Henderson	240A, 299A
Hendersonville	221A
Humboldt	272A, 287A
Huntingdon	229A, 265A
Jackson	268A, 276A, 281C
Jamestown	280A, 286A
Jefferson City	257A
Jellico	274A
Johnson City	268C
Karns	226A
Kingsport	253C, 285A
Knoxville	248C, 278C, 283A 299C
La Follette	285A
Lawrenceburg	240A, 248A
Lebanon	255A, 298C
Lenoir City	228A
Lewisburg	232A
Lexington	257A
Livingston	240A
Lobelville	233C2
Loudon	256A, 287A
Madisonville	258A
Manchester	259C
Martin	269A
Maryville	239A
McKenzie	295C1
McKinnon	268A
McMinnville	280A
Memphis	246C1, 259C, 274C1, 283C,
Milan	222C
Minor Hill	221A
Monterey	226A, 295C2
Morristown	240A
Mt. Juliet	294A
Murfreesboro	242C

TENNESSEE—Continued

	Channel No.
Nashville	225C, 238C, 250C, 277C, 290C
Newport	225A
Oak Ridge	232A, 262C
Oliver Springs	254A
Oneida	288A
Paris	231A
Parsons	247A
Pulaski	252A
Red Bank	232A
Ripley	235A
Rockwood	289A
Rogersville	293A
St. Joseph	268A
Savannah	228A, 269A
Selmer	230A, 288A
Sevierville	271C1
Seymour	242A
Shelbyville	275C1
Signal Mountain	251A
Smithville	269A
Smyrna	231A
Soddy-Daisy	272A
South Pittsburg	247C2
Sparta	288A
Spencer	297A
Spring City	230C3
Springfield	232A
Surgoinsville	282A
Sweetwater	252A
Tazewell	231A
Trenton	248C3
Tullahoma	227C
Union City	285A
Wartburg	267A
Waverly	286C2
Waynesboro	235A
Woodbury	285A

TEXAS

	Channel No.
Abilene	223C2, 264C, 286C, 292A, 300C1
Alamo	285A
Alice	221A, 275C2
Alpine	224A
Amarillo	226C1, 231C, 245C, 250C, 254C1, 265C1, 270C, 275C1, 289A
Andrews	288A
Anson	252A
Arlington	235C
Atlanta	257A
Austin	229C, 238C, 251C1, 264C, 272C2
Ballinger	276A
Bandera	252A
Bastrop	296C2
Bay City	241C2, 273C2
Beaumont	231C, 236C, 248C, 273C2, 300C
Beeville	250C2, 285A
Belton	292C3
Big Lake	252A, 280A
Big Spring	237A
Bishop	296A
Bloomington	295A
Bonham	252C3
Borger	282C1
Bowie	264C3
Brady	237A
Breckenridge	228C3
Brenham	231A, 291C2
Bridgeport	244A
Brownfield	282C2
Brownsville	258C, 262C
Brownwood	257C2, 268C1, 281C1
Bryan	252A, 258A, 284C2
Burkburnett	284C
Burnet	223A, 295A
Caldwell	236A
Cameron	267A, 280C2
Campwood	256A
Canadian	235C1
Canyon	296A, 300C
Carrizo Springs	221A, 228A
Carthage	255C1, 282A
Center	272A
Centerville	276A
Childress	241C2
Claude	239A
Clarksville	253C3
Cleveland	246C1
Clifton	277A
Coleman	296A
College Station	297C3
Colorado City	292A
Columbus	252A
Comanche	232A
Comfort	236C2
Commerce	221A
Conroe	295C
Copperas Cove	276A
Corpus Christi	230C1, 234A, 238C, 243C1, 256C1
Corsicana	300C1
Cotulla	249A
Crane	265A
Crockett	224C2, 228C2
Crystal City	232A
Cuero	249A
Daingerfield	295A
Dalhart	240C3
Dallas	223C, 250C, 254C, 262C, 266C, 275C, 283C, 287C
Del Rio	232A, 242C
Denison	285C2
Denison-Sherman	269A
Denton	256C, 291C
Denver City	248C2
Devine	221A
Diboll	238C1
Dimmitt	240C3
Dublin	285C3
Dumas	237C3
Eagle Pass	224A
Eastland	244A, 249A
Edinburg	281C, 300C
Edna	269A
El Campo	245C
El Paso	222C, 226C, 230C, 234C, 238C, 242C, 248C, 260C, 271C
Electra	236A

TEXAS—Continued

	Channel No.
Elgin	223A
Fabens	276A
Fairfield	221A
Falfurrias	277A, 292A
Farwell	222C1, 252C2
Floresville	231C2
Floydada	237A
Fort Stockton	232A
Fort Worth	231C, 242C, 258C, 298C1
Fort Worth-Dallas	246C, 271C
Franklin	270A
Fredericksburg	266C
Freeport	277C
Freer	240A
Friona	236A
Gainesville	233C, 300C2
Galveston	285A, 293C
Gatesville	252A
George West	281A
Georgetown	244C1, 299C3
Giddings	268C2
Gilmer	237A
Gonzales	292A
Graham	296C3
Granbury	294C
Greenville	226A
Gregory	283A
Groves	223C2
Hallettsville	260A
Haltom City	227C2
Hamilton	221A
Hamlin	279C
Harker Heights	298A
Harlingen	233C, 241C
Haskell	238C
Hearne	232A
Hebbronville	269A
Henderson	261A
Hereford	278C2, 292C3
Higland Park-Dallas	279C
Hillsboro	273C
Hondo	253A
Hooks	240A
Houston	229C, 233C, 239C, 243C, 250C, 256C, 262C, 266C, 271C, 275C, 281C, 289C
Howe	237A
Huntington	270A
Huntsville	235A, 259A, 269A, 278A
Idalou	289A
Jacksboro	229A
Jacksonville	272A, 293C
Jasper	264C2, 274C2
Jefferson	283A
Johnson City	300C2
Junction	226A
Kennedy	221A
Kermit	292A
Kerrville	221A, 232C2
Kilgore	241C2
Killeen	222A, 227C
Kingsville	224A, 248C1
La Grange	285A
Lake Jackson	298C
Lamesa	262C1, 284C1
Lampasas	255C1

TEXAS—Continued

	Channel No
Laredo	224A, 235C1, 291A
Levelland	288A
Liberty	260C2
Littlefield	238A
Livingston	222C2
Llano	284C2
Longview	247C2, 289C
Lorenzo	251C2
Los Ybanez	300C2
Lubbock	229C1, 233C1, 258C1, 266C1, 273C1, 280C2
Lufkin	257C2, 286C
Luling	234C
Madisonville	241C2
Malakoff	240A
Marfa	226A
Marlin	225C2
Marshall	222A, 280A
Mason	250C2
McAllen	245C, 253C
Mc Camey	237A
McKinney	295A
Memphis	287C1
Mercedes	292A
Merkel	274C1
Mexia	285A
Midland	222C, 227C1, 277C1, 294C1
Mineola	244A
Mineral Wells	240C3
Mirando City	263C2
Mission	288A
Monahans	260C1, 271C
Mount Pleasant	264C
Muenster	293A
Muleshoe	276A
Nacogdoches	221A, 277C1
Navasota	223A
New Boston	278A
New Braunfels	221A
New Ulm	222A
Nolanville	297A
Odem	252A
Odessa	241C2, 245C1, 256C
Olney	248C2
Orange	283C, 291C
Ozona	232A
Palacios	264A
Palestine	244A, 252C2
Pampa	262C2
Paris	230C2, 270C2,
Pasadena	225C
Pearsall	237A, 281A
Pecos	247C, 252A
Perryton	240A
Pittsburg	245A, 276A
Plainview	247C1, 280C1,
Pleasanton	252A
Port Arthur	227C, 253C
Port Isabel	266A
Port Lavaca	227C1
Portland	288A
Post	297C2
Premont	285A
Quanah	265C3
Raymondville	271C2, 289A
Refugio	291C2

TEXAS—Continued

	Channel No
Rio Grande City	276A
Robstown	260C1, 286A
Rockdale	253A
Rockport	272C2
Roma	249A
Rosenberg	285A
Round Rock	290C2
Rusk	249A
San Angelo	225C1, 230C1, 234C, 248C1, 254C1, 270C1, 298C1
San Antonio	225C, 241C, 247C, 258C, 262C, 270C1, 274Cl, 283C1, 298C
San Augustine	260A
San Diego	290A
San Marcos	278C
San Saba	246A
Seabrook	221C2
Seguin	287C
Seminole	292A
Seymour	230C2
Shamrock	224A
Sherman	244A, 281A
Silsbee	269A
Sinton	267C1, 279C1
Slaton	224C1
Snyder	269A
Sonora	221A
South Padre Island	224A, 237A
Spearman	252A
Stamford	221A
Stanton	290A
Stephenville	252A, 289C1
Sulphur Springs	240A
Sweetwater	244A
Tahoka	237A
Taylor	221A
Temple	269A, 282C2
Terrell	296A
Terrell Hills	294C
Texarkana	251C, 273C1
Tulia	285C3
Tye	259C1
Tyler	221A, 226C, 268C, 281C2
Uvalde	229A, 272A, 285A
Vernon	272A
Victoria	222A, 236C1, 254C, 265A, 300C1
Waco	233A, 238C, 246C, 260C, 296A
Whitehouse	297C2
Wichita Falls	225C, 260C1, 277C, 288A, 292C2
Winfield	249C2
Winnsboro	285A
Winters	240A
Woodville	234C2
Yoakum	223A

EFFECTIVE DATE NOTE 1: At 55 FR 34568, August 23, 1990, Carthage was amended by adding Channel 282A, effective October 11, 1990.

EFFECTIVE DATE NOTE 2: At 55 FR 35906, September 4, 1990, Georgetown was amended by removing Channel 299A and adding Channel 299C3, effective October 15, 1990.

EFFECTIVE DATE NOTE 3: At 55 FR 37237, September 10, 1990, Amarillo was amended by adding Channel 265C1, effective October 22, 1990.

EFFECTIVE DATE NOTE 4: At 55 FR 39970, October 1, 1990, Franklin was amended by removing Channel 255A and adding Channel 270A; and Lampasas was amended by removing Channel 256C1 and adding Channel 255C1, effective November 8, 1990.

UTAH

	Channel No
Blanding	221A
Bountiful	258C
Brian Head	251C
Brigham City	264C, 295C
Cedar City	223C, 235C
Centerville	289C1
Coalville	223A
Delta	239C1
Kanab	266C1
Logan	225C1, 233C1
Manti	286C
Midvale	274C
Moab	244C3
Nephi	224A
Ogden	238C, 250C, 266C, 270C
Orem	298C
Payson	222A
Price	252C3, 265A
Provo	235C, 241C
Richfield	229C, 248
Roosevelt	230A, 253C2
Roy	300C
St. George	228A, 259C
Salt Lake City	227C, 231C, 246C, 254C, 262C, 278C, 282C
Smithfield	280A
Spanish Fork	293C1
Tooele	221A
Torrey	253A
Tremonton	286C2
Vernal	290C

VERMONT

	Channel No.
Barre	296A
Bellows Falls	296A
Bennington	232A
Brandon	270A
Brattleboro	224A, 244A
Burlington	225C, 255C1, 300C
Canaan	231A
Danville	239A
Derby Center	221A
Hartford	282A
Killington	287C2
Lyndon	252A
Manchester	274B
Marlboro	268A
Middlebury	265A
Montpelier	284C2
Randolph	272A
Royalton	259A
Rupert	281A
Rutland	233C3, 246C2, 251C2
South Burlington	237A
Springfield	228A
St. Albans	272A
St. Johnsbury	288A
Stowe	269A
Vergennes	294C2
Warren	241A

VERMONT—Continued

	Channel No.
Waterbury	277C2
West Rutland	298A
White River Junction	237A
Wilmington	264A
Woodstock	230A

EFFECTIVE DATE NOTE: At 55 FR 37485, September 12, 1990, Rutland was amended by removing Channel 233A and adding Channel 233C3, effective October 22, 1990.

VIRGINIA

	Channel No.
Abingdon	224A
Accomac	257B1
Alberta	276A
Alta Vista	288A
Amherst	300C1
Appomattox	274B, 296A
Arlington	286B
Ashland	261A
Bedford	295A
Berryville	288A
Big Stone Gap	228A
Blacksburg	285A
Blackstone	228A
Bluefield	292A
Bowling Green	245A
Bridgewater	286A
Broadway	241B1
Buena Vista	244B1
Buffalo Gap	288A
Cape Charles	241B
Cedar Bluff	299A
Charlottesville	224A, 236A, 248B, 296A
Chase City	260A
Chesa-Portsm-Va Bea	271A
Chester	221A
Christiansburg	264A
Churchville	292B1
Clarksville	252A
Clifton Forge	280A
Clinchco	226A
Coeburn	259A
Colonial Beach	240A
Colonial Heights	237B1
Covington	265A
Crewe	284C1
Crozet	272A
Culpeper	276A
Danville	277C1
Deltaville	222A
Elkton	252A
Emporia	258A
Exmore	291A, 298B
Farmville	239B, 267A
Franklin	269A
Fredericksburg	227B, 268B
Front Royal	237A, 257A
Galax	251C
Gloucester	256A
Gretna	292A
Grundy	249A
Hampton	267B
Harrisonburg	264B, 282B
Hot Springs	296A
Kilmarnock	269A
Lawrenceville	255A

VIRGINIA—Continued

	Channel No
Lebanon	297A
Louisa	288A
Luray	280A, 289A
Lynchburg	252A, 261A, 269 290A
Manassas	294B
Marion	230C, 273A
Martinsville	242C
Mechanicsville	224A
Mount Jackson	245B1
Narrows	267A
New Market	277A
Newport News	247B
Norfolk	239B, 254B, 25 263B, 275B, 2 287B
Norton	292A
Onley-Onancock	277B
Orange	255A
Pennington Gap	288A
Petersburg	257A, 262A
Pound	272A
Pulaski	296C3
Radford	269A
Richlands	264A, 288A
Richmond	233B, 251B, 266 271B, 279B, 2
Roanoke	222C, 235C, 256 287A
Rocky Mount	260A
Ruckersville	221A
Rural Retreat	276A
Salem	228A
Saltville	291A
South Boston	237A, 248C1
South Hill	288A
Spotsylvania	257A
Staunton	226A, 232B1, 25
Strasburg	285A
Suffolk	225B, 295C
Tappahannock	288A
Tazewell	261A
Vinton	268A, 291A
Virginia Beach	235B
Warrenton	232A, 299B
Warsaw	265A
West Point	300A
White Stone	261A
Williamsburg	243B
Winchester	223B, 273B
Windsor	299A
Woodbridge	290B
Woodstock	229B1
Yorktown	231B

EFFECTIVE DATE NOTE: At 55 FR 39970, October 1, Pulaski was amended by removing Channel 296A and a Channel 296C3, effective November 8, 1990.

WASHINGTON

	Channel No.
Aberdeen	257C1, 284C1
Bellevue	223C
Bellingham	225C, 282C
Bremerton	295C
Camas	234A
Cashmere	266A
Centralia	275C
Chelan	228A

WASHINGTON—Continued

	Channel No.
Cheney	266C
Clarkston	231C
Colfax	272A
Colville	221A
Davenport	273A
Dayton	223A
Deer Park	296C2
Dishman	293A
East Wenatchee	249A
Edmonds	287C
Ellensburg	237C2, 276C2
Ephrata	222C2, 230C2
Forks	280A
Goldendale	272A
Grand Coulee	253C
Grandview	265A
Hoquiam	237A
Kelso	233A
Kennewick	287C
Long Beach	232A
Longview	288A
Lynden	293C
Medical Lake	237A
Moses Lake	257A, 262C1
Naches	245A
Newport	285A
Olympia	241C
Omak	226C2
Opportunity	241C
Othello	248C2
Pasco	252A, 267A
Prosser	269C3
Pullman	258C, 282C1
Quincy	244A
Raymond	249C3
Richland	235C, 274C, 293C
Rock Island	258A
Seattle	227C, 231C, 235C1, 239C, 243C, 251C, 255C, 260C, 264C, 268C, 273C, 299C
Spokane	225C, 229C, 245A, 251C, 255C, 260C, 280C3, 254A, 289C, 300C
Sunnyside	244A
Tacoma	247C, 279C, 291C
Toppenish	225C2
Vancouver	290C2
Walla Walla	227C1, 239C, 246C, 265A
Wenatchee	271C, 285C2
Wilson Creek	277A
Wisp	292A
Yakima	233C1, 252A, 257A, 281C, 289C1, 297C

WEST VIRGINIA

	Channel No.
Barrackville	226A
Beckley	258B, 279B
Berkeley Springs	228A
Bethlehem	288A
Bluefield	283C
Bridgeport	281A
Buckhannon	228A, 267B

WEST VIRGINIA—Continued

	Channel No.
Charles Town	252A
Charleston	241B, 248B, 260B, 274B
Clarksburg	224A, 285A, 293B
Danville	223A
Dunbar	233B1
Elkins	234B1, 257A
Fairmont	232A, 250B
Fisher	279A
Grafton	240A
Hinton	272A
Huntington	263B, 277B, 300B
Keyser	231B, 296A
Kingwood	244A, 299A
Lewisburg	288A
Logan	270B
Lost Creek	242A
Mannington	274A
Martinsburg	248B
Matewan	294A
Miami	297B
Milton	292A
Montgomery	227A
Morgantown	261A, 270B
Moundsville	243A
Mount Hope	290B
Mullens	224A
New Martinsville	280A
Oak Hill	231B
Parkersburg	236B, 256B1, 275A
Petersburg	269A
Pocatalico	254A
Point Pleasant	258A
Princeton	240A, 265A
Rainelle	244A
Ravenswood	291A
Ripley	252A
Romney	261A
Ronceverte	249A
Salem	289A
South Charleston	265A
Spencer	284A
St. Albans	286B
St. Marys	230B1
Summersville	225B
Sutton	246B1
Vienna	261A
Webster Springs	262A
Welch	275A
Weston	272B1
Westover	265A
Wheeling	247B, 254B, 298B
White Sulphur Springs	227A
Williamson	243B

WISCONSIN

	Channel No.
Algoma	243A
Altoona	251A
Antigo	287C1
Appleton	289C
Ashland	244C2
Baradoo	235B
Beaver Dam	237A
Berlin	272A
Black River Falls	259A

WISCONSIN—Continued

	Channel No.
Bloomer	236A
Brillion	242A
Brookfield	295A
Chippewa Falls	288A
Cleveland	276A
Clintonville	221A
Columbus	263A
Crandon	244A
De Pere	240A
Dodgeville	257A
Durand	240A
Eagle River	233C2
Eau Claire	231C1, 264C1, 283C
Elk Mound	225A
Evansville	290A
Fond Du Lac	296A
Fort Atkinson	297B
Green Bay	253C1, 266C
Hartford	285A
Hayward	221A, 269A
Janesville	260B
Kaukauna	285A
Kenosha	236B
Kewaunee	224A
LaCrosse	227C, 239C2, 285A
Ladysmith	224A, 279C
Lake Geneva	241A
Lancaster	249A
Lomira	294A
Madison	251B, 268B, 273B, 281B
Manitowoc	221A
Marinette	236C1
Marshfield	293C1
Mauston	221A
Mayville	254A
Medford	257C3
Menomonee Falls	252A
Merrill	281C3
Middleton	292A
Milwaukee	227B, 233B, 239B, 243B, 247B, 256B, 271B, 275B, 299B
Minocqua	240C1
Mishicot	298A
Monomonie	221A
Monroe	229B
Mosinee	234C2
Neehah-Menasha	232A, 261A
Neillsville	224A, 298C1
Nekoosa	229A
New Holstein	226A
New London	228C2
New Richmond	296C2
Oconto	296A
Oshkosh	244A, 280A
Park Falls	252A
Peshtigo	241A
Platteville	296A
Plymouth	283A
Port Washington	261A
Portage	261A
Prairie Du Chien	232C2
Racine	221A, 264B
Reedsburg	285A
Rhinelander	248C1, 262C1
Rice Lake	242C1, 249C2
Richland Center	265A
Ripon	241A
River Falls	292A

WISCONSIN—Continued

	Channel
Rudolph	260A
Sauk City	242B1
Seymour	282A
Shawano	257C3
Sheboygan	249A
Shell Lake	237A
Sparta	246C1
Spencer	221A
Spooner	292A
Stevens Point	250C1, 285A
Sturgeon Bay	230C1, 249A, 2
Sturtevant	284A
Sun Prairie	221A
Superior	273C1
Suring	274C1
Tomah	233A, 241A, 2
Tomahawk	224A
Trempealeau	288A
Two Rivers	272A
Verona	288A
Viroqua	272A
Washburn	290C1
Watertown	231B
Waukesha	291B
Waunakee	286A
Waupaca	224A
Waupun	258C2
Wausau	238C, 270C, 30
Wautoma	222A
Wauwatosa	279B
West Bend	223B
West Salem	261A
Whitehall	272A
Whitewater	283A, 293A
Whiting	244A
Wisconsin Dells	296A
Wisconsin Rapids	277C1

EFFFECTIVE DATE NOTE 1: At 55 FR 35147, Au 1990, Shawano was amended by removing Chann and adding Channel 257C3, effective October 10,

EFFFECTIVE DATE NOTE 2: At 55 FR 35319, Au 1990, Merrill was amended by removing Channel 2 adding Channel 281C3, effective October 9, 1990.

WYOMING

	Channel
Afton	252A
Albin	297C2
Buffalo	225C
Burns	270C2
Casper	233C, 238C, 27 295C
Cheyenne	250C, 265C1, 2
Cody	250C
Diamondville	287C2
Douglas	257A
Evanston	292A
Fort Bridger	257A
Gillette	245C1, 264C1
Greybull	262C
Jackson	239C, 245C1
Kemmerer	297A
Lander	248C1
Laramie	236C, 275C, 28
Lost Cabin	256C
Newcastle	257A
Pine Bluffs	287C2

WYOMING—Continued

	Channel No.
Pinedale	266C2
Powell	233C, 281C
Rawlins	224A
Riverton	226C1, 230C1
Rock Springs	236C, 243C, 283C
Saratoga	260C
Sheridan	235C1, 243C2
Sundance	276A
Thermopolis	252A, 269A
Torrington	252C3
Wheatland	269A
Worland	241C2

AMERICAN SAMOA

	Channel No.
Leone	266C1
Pago Pago	221C3

CENTRAL MARIANAS

	Channel No.
Saipan	230A

GARAPAN

	Channel No.
Saipan	258C, 280C2

GUAM

	Channel No.
Agana	230C2, 238C2, 248C2, 262C2, 270C2

PUERTO RICO

	Channel No.
Aguada	288A
Aguadilla	225B, 262B
Arecibo	293B1, 297B
Bayamon	234B, 264B
Cabo Rojo	272A
Caguas	277B
Camuy	275B
Carolina	299B
Cidra	249A
Corozal	223B
Fajardo	243B
Guayama	295B
Hormigueros	221A, 291A
Isabela	268B
Lajes	279B
Luquillo	221A
Manati	245B

PUERTO RICO—Continued

	Channel No.
Maricao	241B
Mayaguez	231B, 248B, 256B
Naguabo	225A
Ponce	227B1, 266B, 270B, 286B
Quebradillas	252A
Rio Grande	247A
Rio Piedras	239B
San German	236B
San Juan	229B, 253B, 260B, 273B, 284B, 289B
Utuado	281B
Vieques	255B

VIRGIN ISLANDS

	Channel No.
Charlotte Amalie	241B1, 246B, 250B, 271B, 282B, 287B
Christiansted	232A, 236B, 256B, 262B, 291B
Cruz Bay	222B

(Sec. 316, 66 Stat. 717; 47 U.S.C. 316; sec. 5, 48 Stat., as amended, 1068; 47 U.S.C. 154, 155; secs. 2, 3, 4, 301, 303, 307, 308, 309, 315, 317, 48 Stat. as amended, 1064, 1065, 1066, 1081, 1082, 1083, 1084, 1085, 1088, 1089; (47 U.S.C. 152, 153, 301, 303, 307, 308, 309, 315, 317); secs 1, 201-205, 208, 215, 218, 313, 314, 403, 404, 410, 602; 48 Stat. as amended; 1070, 1071, 1072, 1073, 1076, 1077, 1087, 1094, 1098, 1102 (47 U.S.C. 151, 201-205, 208, 215, 218, 313, 314, 403, 404, 410, 602))

[30 FR 12711, Oct. 6, 1965]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 73.202, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 73.203 Availability of channels.

(a) Except as provided for in paragraph (b) of this section, applications may be filed to construct FM broadcast stations only at the communities and on the channels contained in the Table of Allotments (§ 73.202(b)). Applications that fail to comply with this requirements, whether or not accompanied by a petition to amend the Table, will not be accepted for tender.

(b) After the initial filing window closes for a vacant FM allotment, an applicant may propose a lower class channel. Applications for the modification of an existing FM broadcast station may propose a lower class of channel. In both cases, the applicant need not file a petition for rule making to amend the Table of Allotments (§ 73.202(b)) to specify the lower channel class.

[54 FR 11954, Mar. 23, 1989]

§ 73.204 International agreements and other restrictions on use of channels.

See §§ 73.207, 73.220 and 73.1650.

[49 FR 10264, Mar. 20, 1984]

§ 73.205 Zones.

For the purpose of allotments and assignments, the United States is divided into three zones as follows:

(a) Zone I consists of that portion of the United States located within the confines of the following lines drawn on the United States Albers Equal Area Projection Map (based on standard parallels 291/2° and 451/2°; North American datum): Beginning at the most easterly point on the State boundary line between North Carolina and Virginia; thence in a straight line to a point on the Virginia-West Virginia boundary line located at north latitude 37°49′ and west longitude 80°12′30″; thence westerly along the southern boundary lines of the States of West Virginia, Ohio, Indiana, and Illinois to a point at the junction of the Illinois, Kentucky, and Missouri State boundary lines; thence northerly along the western boundary line of the State of Illinois to a point at the junction of the Illinois, Iowa, and Wisconsin State boundary lines; thence easterly along the northern State boundary line of Illinois to the 90th meridian; thence north along this meridian to the 43.5° parallel; thence east along this parallel to the United States-Canada border; thence southerly and following that border until it again intersects the 43.5° parallel; thence east along this parallel to the 71st meridian; thence in a straight line to the intersection of the 69th meridian and the 45th parallel; thence east along the 45th parallel to the Atlantic Ocean. When any of the above lines pass through a city, the city shall be considered to be located in Zone I. (See Figure 1 of § 73.699.)

(b) Zone I-A consists of Puerto Rico, the Virgin Islands and that portion of the State of California which is
ed south of the 40th parallel.

(c) Zone II consists of Alaska, H
and the rest of the United S
which is not located in either Z
or Zone I-A.

[29 FR 14116, Oct. 14, 1964, and
10125, July 27, 1966, as amended at
29504, June 27, 1983]

§ 73.207 Minimum distance separati
tween stations.

(a) Except for assignments
pursuant to §§ 73.213 or 73.215, F
lotments and assignments must be
arated from other allotments an
signments on the same channel
channel) and five pairs of adj
channels by not less than the
mum distances specified in parag
(b) and (c) of this section. The
mission will not accept petition
amend the Table of Allotments,
cations for new stations, or ap
tions to change the channel or
tion of existing assignments u
transmitter sites meet the mini
distance separation requirement
this section, or such applications
form to the requirements of §§ 7
or 73.215. However, application
modify the facilities of stations
short-spaced antenna locations
thorized pursuant to prior waive
the distance separation requirem
may be accepted, provided that
applications propose to maintai
improve that particular spacing
ciency. Class D (secondary) as
ments are subject only to the dist
separation requirements containe
paragraph (b)(3) of this section.
§ 73.512 for rules governing the c
nel and location of Class D (sec
ary) assignments.)

(b) The distances listed in Table
B, and C apply to allotments and
signments on the same channel
each of five pairs of adjacent c
nels. The five pairs of adjacent c
nels are the first (200 kHz above
200 kHz below the channel under
sideration), the second (400 kHz a
and below), the third (600 kHz a
and below), the fifty-third (10.6
above and below), and the fifty-fo
(10.8 MHz above and below). The
tances in the Tables apply regar

of whether the proposed station class appears first or second in the "Relation" column of the table.

(1) Domestic allotments and assignments must be separated from each other by not less than the distances in Table A which follows:

TABLE A—MINIMUM DISTANCE SEPARATION REQUIREMENTS IN KILOMETERS (MILES)

Relation	Co-channel	200 kHz	400/600 kHz	10.6/10.8 MHz
A to A	115 (71)	72 (45)	31 (19)	10 (6)
A to B1	143 (89)	96 (60)	48 (30)	12 (7)
A to B	178 (111)	113 (70)	69 (43)	15 (9)
A to C3	142 (88)	89 (55)	42 (26)	12 (7)
A to C2	166 (103)	106 (66)	55 (34)	15 (9)
A to C1	200 (124)	133 (83)	75 (47)	22 (14)
A to C	226 (140)	165 (103)	95 (59)	29 (18)
B1 to B1	175 (109)	114 (71)	50 (31)	14 (9)
B1 to B	211 (131)	145 (90)	71 (44)	17 (11)
B1 to C3	175 (109)	114 (71)	50 (31)	14 (9)
B1 to C2	200 (124)	134 (83)	56 (35)	17 (11)
B1 to C1	233 (145)	161 (100)	77 (48)	24 (15)
B1 to C	259 (161)	193 (120)	105 (65)	31 (19)
B to B	241 (150)	169 (105)	74 (46)	20 (12)
B to C3	211 (131)	145 (90)	71 (44)	17(11)
B to C2	241 (150)	169 (105)	74 (46)	20 (12)
B to C1	270 (168)	195 (121)	79 (49)	27 (17)
B to C	274 (170)	217 (135)	105 (65)	35 (22)
C3 to C3	153 (95)	99 (62)	43 (27)	14 (9)
C3 to C2	177 (110)	117 (73)	56 (35)	17 (11)
C3 to C1	211 (131)	144 (90)	76 (47)	24 (15)
C3 to C	237 (147)	176 (109)	96 (60)	31 (19)

TABLE A—MINIMUM DISTANCE SEPARATION REQUIREMENTS IN KILOMETERS (MILES)—Continued

Relation	Co-channel	200 kHz	400/600 kHz	10.6/10.8 MHz
C2 to C2	190 (118)	130 (81)	56 (36)	20 (12)
C2 to C1	224 (139)	158 (98)	79 (49)	27 (17)
C2 to C	249 (155)	188 (117)	105 (65)	35 (22)
C1 to C1	245 (152)	177 (110)	82 (51)	34 (21)
C1 to C	270 (168)	209 (130)	105 (65)	41 (25)
C to C	290 (180)	241 (150)	105 (65)	48 (30)

(2) Under the Canada-United States FM Broadcasting Agreement, domestic U.S. allotments and assignments within 320 kilometers (199 miles) of the common border must be separated from Canadian allotments and assignments by not less than the distances given in Table B, which follows. When applying Table B, U.S. Class C2 allotments and assignments are considered to be Class B; also, U.S. Class C3 allotments and assignments and U.S. Class A assignments operating with more than 3 kW ERP and 100 meters antenna HAAT (or equivalent lower ERP and higher antenna HAAT based on a class contour distance of 24 km) are considered to be Class B1.

TABLE B—MINIMUM DISTANCE SEPARATION REQUIREMENTS IN KILOMETERS

Relation	Co-Channel	Adjacent Channels			I.F.
	0 kHz	200 kHz	400 kHz	600 kHz	10.6/10.8 MHz
A-A	132	85	45	37	8
A-B1	180	113	62	54	16
A-B	206	132	76	69	16
A-C1	239	164	98	90	32
A-C	242	177	108	100	32
B1-B1	197	131	70	57	24
B1-B	223	149	84	71	24
B1-C1	256	181	106	92	40
B1-C	259	195	116	103	40
B-B	237	164	94	74	24
					8
B-C1	271	195	115	95	40
B-C	274	209	125	106	40
C1-C1	292	217	134	101	48
C1-C	302	230	144	111	48
C-C	306	241	153	113	48

(3) Under the Mexico-United States FM Broadcasting Agreement, domestic U.S. allotments and assignments within 320 kilometers (199 miles) of the common border must be separated from Mexican allotments and assignments by not less than the distances given in Table C, which follows. When applying Table C, U.S. Class C2, C3 and B1 allotments and assignments

are considered to be Class B; U.S. Class C1 allotments and assignments are considered to be Class C; also, U.S. Class A assignments operating with more than 3 kW ERP and 100 meters antenna HAAT average terrain (or equivalent lower ERP and higher antenna HAAT based on a class contour distance of 24 km) are considered to be Class B.

TABLE C—MINIMUM DISTANCE SEPARATION REQUIREMENTS IN KILOMETERS (MILES)

Relation	Co-channel	200 kHz	400/600 kHz	10.6/10.8 MHz
A to A	105 (65)	65 (40)	25 (15)	8 (5)
A to B	175 (110)	105 (65)	65 (40)	16 (10)
A to C	210 (130)	170 (105)	105 (65)	32 (20)
A to D	95 (60)	50 (30)	25 (15)	8 (5)
B to B	240 (150)	170 (105)	65 (40)	25 (15)
B to C	270 (170)	215 (135)	105 (65)	40 (25)
B to D	170 (105)	95 (60)	65 (40)	16 (10)
C to C	290 (180)	240 (150)	105 (65)	48 (30)
C to D	200 (125)	155 (95)	105 (65)	25 (15)
D to D	18 (11)	10 (6)	5 (3)	3 (2)

(c) The distances listed below apply only to allotments and assignments on Channel 253 (98.5 MHz). The Commission will not accept petitions to amend the Table of Allotments, applications for new stations, or applications to change the channel or location of existing assignments where the following minimum distances (between transmitter sites, in kilometers) from any TV Channel 6 allotment or assignment are not met:

MINIMUM DISTANCE SEPARATION FROM TV CHANNEL 6 (82–88 MHZ)

FM Class	TV Zone I	TV Zones II & III
A	17	22
B1	19	23
B	22	26
C3	19	23
C2	22	26
C1	29	33
C	36	41

[48 FR 29504, June 27, 1983, as amended at 49 FR 10264, Mar. 20, 1984; 49 FR 19670, May 9, 1984; 49 FR 50047, Dec. 26, 1984; 51 FR 26250, July 22, 1986; 54 FR 14963, Apr. 14, 1989; 54 FR 16366, Apr. 24, 1989; 54 FR 19374, May 5, 1989; 54 FR 35338, Aug. 25, 1989]

§ 73.208 Reference points and dist computations.

(a)(1) The following reference poi must be used to determine dista separation requirements when p tions to amend the Table of Al ments (§ 73.202(b)) are considered:

First, transmitter sites if authorized

Second, reference coordinates de nated by the FCC;

Third, coordinates listed in the Uni States Department of Interior pu cation entitled *Index to the Natio Atlas of the United States of Am ica;* or

Last, coordinates of the main p office.

(The community's reference points which the petition is submitted normally be the coordinates listed the above publication.)

(2) When the distance between co munities is calculated using commu ty reference points and it does meet the minimum separation requi ments of § 73.207, the channel m still be allotted if a transmitter site available that would meet the mi mum separation requirements and permit the proposed station to m the minimum field strength requi ments of § 73.315. A showing indic ing the availability of a suitable should be sumitted with the petiti In cases where a station is not auth ized in a community or communit and the proposed channel cannot m the separation requirement a show should also be made indicating a quate distance between suitable tra mitter sites for all communities.

(b) Station separations in licens proceedings shall be determined the distance between the coordinat of the proposed transmitter site in o community and

(1) The coordinates of an authori transmitter site for the pertine channel in the other community; where such transmitter site is available for use as a reference poi

(2) The coordinates of the oth community as listed in the publicati listed in paragraph (a) of this secti or, if not contained therein,

(3) The coordinates of the main po office of such other community.

(4) In addition, where there are pending applications in other communities which, if granted, would have to be considered in determining station separations, the coordinates of the transmitter sites proposed in such applications must be used to determine whether the requirements with respect to minimum separations between the proposed stations in the respective cities have been met.

(c) The method given in this paragraph shall be used to compute the distance between two reference points, except that, for computation of distance involving stations in Canada and Mexico, the method for distance computation specified in the applicable international agreement shall be used instead. The method set forth in this paragraph is valid only for distances not exceeding 475 km (295 miles).

(1) Convert the latitudes and longitudes of each reference point from degree-minute-second format to degree-decimal format by dividing minutes by 60 and seconds by 3600, then adding the results to degrees.

(2) Calculate the middle latitude between the two reference points by averaging the two latitudes as follows:

$$ML=(LAT1_{dd}+LAT2_{dd})\div 2$$

(3) Calculate the number of kilometers per degree latitude difference for the middle latitude calculated in paragraph (c)(2) as follows:

$$KPD_{lat}=111.13209-0.56605\ \cos(2ML)+0.00120\ \cos(4ML)$$

(4) Calculate the number of kilometers per degree longitude difference for the middle latitude calculated in paragraph (c)(2) as follows:

$$KPD_{lon}=111.41513\ \cos(ML)-0.09455\ \cos(3ML)+0.00012\ \cos(5ML)$$

(5) Calculate the North-South distance in kilometers as follows:

$$NS=KPD_{lat}\ (LAT1_{dd}-LAT2_{dd})$$

(6) Calculate the East-West distance in kilometers as follows:

$$EW=KPD_{lon}\ (LON1_{dd}-LON2_{dd})$$

(7) Calculate the distance between the two reference points by taking the square root of the sum of the squares of the East-West and North-South distances as follows:

$$DIST=(NS^2+EW^2)^{0.5}$$

(8) Round the distance to the nearest kilometer.

(9) Terms used in this section are defined as follows:

(i) $LAT1_{dd}$ and $LON1_{dd}$=the coordinates of the first reference point in degree-decimal format.

(ii) $LAT2_{dd}$ and $LON2_{dd}$=the coordinates of the second reference point in degree-decimal format.

(iii) ML=the middle latitude in degree-decimal format.

(iv) KPD_{lat}=the number of kilometers per degree of latitude at a given middle latitude.

(v) KPD_{lon}=the number of kilometers per degree of longitude at a given middle latitude.

(vi) NS=the North-South distance in kilometers.

(vii) EW=the East-West distance in kilometers.

(viii) DIST=the distance between the two reference points, in kilometers.

[28 FR 13623, Dec. 14, 1963, as amended at 29 FR 14116, Oct. 14, 1964; 48 FR 29505, June 27, 1983; 52 FR 37788, Oct. 9, 1987; 52 FR 39920, Oct. 26, 1987; 54 FR 9806, Mar. 8, 1989]

§ 73.209 Protection from interference.

(a) Permittees and licensees of FM broadcast stations are not protected from any interference which may be caused by the grant of a new station, or of authority to modify the facilities of an existing station, in accordance with the provisions of this subpart. However, they are protected from interference caused by Class D (secondary) noncommercial educational FM stations. See § 73.509.

(b) The nature and extent of the protection from interference accorded FM broadcast stations operating on Channels 221-300 is limited solely to the protection that results from the distance separation requirements and the rules governing maximum power and antenna heights. These rules are specified in this subpart.

(c) When the FCC determines that grant of an application would serve the public interest, convenience, and necessity, an antenna location may be specified in a designated antenna farm area that results in separations less than those specified in this subpart. All FM allotments and assignments must be afforded protection from interference equivalent to the protection afforded under the minimum separations specified in this subpart.

[43 FR 39715, Sept. 6, 1978 and 48 FR 29505, June 27, 1983]

EFFECTIVE DATE NOTE: At 54 FR 9802, March 8, 1989, § 73.209 was amended by revising paragraph (b) and removing paragraph (c). At a later date, the Federal Communications Commission will issue a Public Notice, to be published in the Federal Register, announcing the effective date of this action. For the convenience of the user, the new paragraph (b) is set forth as follows:

§ 73.209 Protection from interference.

* * * * *

(b) The nature and extent of the protection from interference afforded FM broadcast stations operating on Channels 221-300 is limited to that which results when assignments are made in accordance with the rules in this subpart.

§ 73.210 Station classes.

(a) The rules applicable to a particular station, including minimum and maximum facilities requirements, are determined by its class. Possible class designations depend upon the zone in which the station's transmitter is located, or proposed to be located. The zones are defined in § 73.205. Allotted station classes are indicated in the Table of Allotments, § 73.202. Class A, B1 and B stations may be authorized in Zones I and I-A, Class A, C3, C2, C1, and C stations may be authorized in Zone II.

(b) The power and antenna height requirements for each class are set forth in § 73.211. If a station has an ERP and an antenna HAAT such that it cannot be classified using the maximum limits and minimum requirements in § 73.211, its class shall be determined using the following procedure:

(1) Determine the reference distance of the station using the procedure in paragraph (b)(1)(i) of § 73.211. If this distance is less than or equal to 28 km, the station is Class A; otherwise,

(2) For a station in Zone I or Zone A, except for Puerto Rico and Virgin Islands:

(i) If this distance is greater than km and less than or equal to 39 k the station is Class B1.

(ii) If this distance is greater than km and less than or equal to 52 k the station is Class B.

(3) For a station in Zone II:

(i) If this distance is greater than km and less than or equal to 39 k the station is Class C3.

(ii) If this distance is greater than km and less than or equal to 52 k the station is Class C2.

(iii) If this distance is greater th 52 km and less than or equal to 72 k the station is Class C1.

(iv) If this distance is greater th 72 km and less than or equal to 92 k the station is Class C.

(4) For a station in Puerto Rico the Virgin Islands:

(i) If this distance is less than equal to 42 km, the station is Class

(ii) If this distance is greater than km and less than or equal to 46 k the station is Class B1.

(iii) If this distance is greater th 46 km and less than or equal to 78 k the station is Class B.

[52 FR 37788, Oct. 9, 1987; 52 FR 39920, O 26, 1987, as amended at 54 FR 16367, A 24, 1989; 54 FR 19374, May 5, 1989; 54 F 35339, Aug. 25, 1989]

§ 73.211 Power and antenna height quirements.

(a) *Minimum requirements.* Except as provided in paragr (a)(3) and (b)(2) of this section, F stations must operate with a minim effective radiated power (ERP) as fo lows:

(i) The minimum ERP for Class stations is 0.1 kW.

(ii) The ERP for Class B1 statio must exceed 6 kW.

(iii) The ERP for Class B stati must exceed 25 kW.

(iv) The ERP for Class C3 stati must exceed 6 kW

(v) The ERP for Class C2 stati must exceed 25 kW.

(vi) The ERP for Class C1 stati must exceed 50 kW.

(vii) The minimum ERP for Class C stations is 100 kW.

(2) Class C stations must have an antenna height above average terrain (HAAT) of at least 300 meters (984 feet). No minimum HAAT is specified for Classes A, B1, B, C3, C2, or C1 stations.

(3) Stations of any class except Class A may have an ERP less than that specified in paragraph (a)(1) of this section, provided that the reference distance, determined in accordance with paragraph (b)(1)(i) of this section, exceeds the distance to the class contour for the next lower class. Class A stations may have an ERP less than 100 watts provided that the reference distance, determined in accordance with paragraph (b)(1)(i) of this section, equals or exceeds 6 kilometers.

(b) *Maximum limits.* (1) Except for stations located in Puerto Rico or the Virgin Islands, the maximum ERP in any direction, reference HAAT, and distance to the class contour for each FM station class are listed below:

Station class	Maximum ERP	Reference HAAT in meters (ft.)	Class contour distance in kilometers
A	6kW (7.8 dBk)	100 (328)	28
B1	25kW (14.0 dBk)	100 (328)	39
B	50kW (17.0 dBk)	150 (492)	52
C3	25kW (14.0 dBk)	100 (328)	39
C2	50kW (17.0 dBk)	150 (492)	52
C1	100kW (20.0 dBk)	299 (981)	72
C	100kW (20.0 dBk)	600 (1968)	92

(i) The reference distance of a station is obtained by finding the predicted distance to the 1mV/m contour using Figure 1 of § 73.333 and then rounding to the nearest kilometer. Antenna HAAT is determined using the procedure in § 73.313. If the HAAT so determined is less than 30 meters (100 feet), a HAAT of 30 meters must be used when finding the predicted distance to the 1 mV/m contour.

(ii) If a station's ERP is equal to the maximum for its class, its antenna HAAT must not exceed the reference HAAT, regardless of the reference distance. For example, a Class A station operating with 6 kW ERP may have an antenna HAAT of 100 meters, but not 101 meters, even though the reference distance is 28 km in both cases.

(iii) Except as provided in paragraph (b)(3) of this section, no station will be authorized in Zone I or I-A with an ERP equal to 50 kW and a HAAT exceeding 150 meters. No station will be authorized in Zone II with an ERP equal to 100 kW and a HAAT exceeding 600 meters.

(2) If a station has an antenna HAAT greater than the reference HAAT for its class, its ERP must be lower than the class maximum such that the reference distance does not exceed the class contour distance. If the antenna HAAT is so great that the station's ERP must be lower than the minimum ERP for its class (specified in paragraphs (a)(1) and (a)(3) of this section), that lower ERP will become the minimum for that station.

(3) For stations located in Puerto Rico or the Virgin Islands, the maximum ERP in any direction, reference HAAT, and distance to the class contour for each FM station class are listed below:

Station class	Maximum ERP	Reference HAAT in meters (ft.)	Class contour distance in kilometers
A	6kW (7.8 dBk)	240 (787)	42
B1	25kW (14.0 dBk)	150 (492)	46
B	50kW (17.0 dBk)	472 (1549)	78

(c) *Existing stations.* Stations authorized prior to March 1, 1984 that do not conform to the requirements of this section may continue to operate as authorized. Stations operating with facilities in excess of those specified in paragraph (b) of this section may not increase their effective radiated powers or extend their 1 mV/m field strength contour beyond the location permitted by their present authorizations. The provisions of this section will not apply to applications to increase facilities for those stations operating with less than the minimum power specified in paragraph (a) of this section.

[53 FR 17042, May 13, 1988, as amended at 54 FR 16367, Apr. 24, 1989; 54 FR 19374, May 5, 1989; 54 FR 35339, Aug. 25, 1989]

§ 73.212 Administrative changes in authorizations.

(a) In the issuance of FM broadcast station authorizations, the Commission will specify the transmitter output power and effective radiated power in accordance with the following tabulation:

Power (watts or kW)	Rounded out to nearest figure (watts or kW)
1 to 3	.05
3 to 10	.1
10 to 30	.5
30 to 100	1
100 to 300	5
300 to 1,000	10

(b) Antenna heights above average terrain will be rounded out to the nearest meter.

[28 FR 13623, Dec. 14, 1963, as amended at 48 FR 29506, June 27, 1983]

§ 73.213 Grandfathered short-spaced stations.

(a) Stations at locations authorized prior to November 16, 1964 that did not meet the separation distances required by § 73.207 and have remained short-spaced since that time may be modified or relocated provided that the predicted distance to the 1 mV/m field strength contour is not extended toward the 1 mV/m field strength contour of any short-spaced station. Mutual increase in the facilities of such stations up to the limits set forth in § 73.211 may be permitted pursuant to an agreement between the affected stations and a showing of public interest. *See* § 73.4235.

(b) Stations at locations authorized prior to May 17, 1989, that did not meet the IF separation distances required by § 73.207 and have remained short-spaced since that time may be modified or relocated provided that the overlap area of the two stations' 36 mV/m field strength contours not increased.

(c) Stations at locations authorize by grant of applications filed prior October 2, 1989 that became shor spaced as a result of the revision § 73.207 in the *Second Report a Order* in MM Docket No. 88-375 ma be modified or relocated in accordanc with paragraph (c)(1) or (c)(2) of th section. New stations on channel allo ments made by order granting pe tions to amend the Table of FM Allo ments which were filed prior to Oc ber 2, 1989, may be authorized in a cordance with paragraph (c)(1) (c)(2) of this section. No other statio will be authorized pursuant to the paragraphs.

(1) *Applications for authorizatio under requirements equivalent to tho of prior rules.* Each application for a thority to operate a Class A statio with no more than 3000 watts ER and 100 meters antenna HAAT (equivalent lower ERP and higher a tenna HAAT based on a class conto distance of 24 km) must specify transmitter site that meets the mi mum distance separation requireme in this paragraph. Each applicati for authority to operate a Class A st tion with more than 3000 watts ER (up to a maximum of 5800 watts), b with an antenna HAAT lower than 1 meters such that the distance to th predicted 0.05 mV/m (34 dBμV/ F(50,10) field strength contour do not exceed 98 km must specify a tran mitter site that meets the minimu distance separation requirements this paragraph. Each application fo authority to operate an FM station any class other than Class A mu specify a transmitter site that mee the minimum distance separation r quirements in this paragraph with r spect to Class A stations operati pursuant to this paragraph or par graph (c)(2) of this section, and tha meets the minimum distance separa tion requirements of § 73.207 with r spect to all other stations.

MINIMUM DISTANCE SEPARATION REQUIREMENTS IN KILOMETERS (MILES)

Relation	Co-channel	200 kHz	400/600 kHz	10.6/10.8 MHz
A to A	105 (65)	64 (40)	27 (17)	8 (5)
A to B1	138 (86)	88 (55)	48 (30)	11 (6)
A to B	163 (101)	105 (65)	69 (43)	14 (9)
A to C3	138 (86)	84 (52)	42 (26)	11 (6)
A to C2	163 (101)	105 (65)	55 (34)	14 (9)
A to C1	196 (122)	129 (80)	74 (46)	21 (13)
A to C	222 (138)	161 (100)	94 (58)	28 (17)

(2) *Applications for authorization of Class A facilities greater than 3000 watts ERP and 100 meters HAAT.* Each application to operate a Class A station with an ERP and HAAT such that the reference distance would exceed 24 kilometers must contain an exhibit demonstrating the consent of the licensee of each co-channel, first, second or third adjacent channel station (for which the requirements of § 73.207 are not met) to a grant of that application. Each such application must specify a transmitter site that meets the applicable IF-related channel distance separation requirements of § 73.207. Applications that specify a transmitter site which is short-spaced to an FM station other than another Class A station which is seeking a mutual increase in facilities may be granted only if no alternative fully-spaced site or less short-spaced site is available. Licensees of Class A stations seeking mutual increases in facilities need not show that a fully spaced site or less short spaced site is available. Applications submitted pursuant to the provisions of this paragraph may be granted only if such action is consistent with the public interest.

[52 FR 37789, Oct. 9, 1987, as amended at 54 FR 14964, Apr. 14, 1989; 54 FR 35339, Aug. 25, 1989]

§ 73.215 Contour protection for short-spaced assignments.

The Commission will accept applications that specify short-spaced antenna locations (locations that do not meet the domestic co-channel and adjacent channel minimum distance separation requirements of § 73.207); *Provided* That, such applications propose contour protection, as defined in paragraph (a) of this section, with all short-spaced assignments, applications and allotments, and meet the other applicable requirements of this section. Each application to be processed pursuant to this section must specifically request such processing on its face, and must include the necessary exhibit to demonstrate that the requisite contour protection will be provided. Such applications may be granted when the Commission determines that such action would serve the public interest, convenience, and necessity.

(a) *Contour protection.* Contour protection, for the purpose of this section, means that on the same channel and on the first, second and third adjacent channels, the predicted interfering contours of the proposed station do not overlap the predicted protected contours of other short-spaced assignments, applications and allotments, and the predicted interfering contours of other short-spaced assignments, applications and allotments do not overlap the predicted protected contour of the proposed station.

(1) The protected contours, for the purpose of this section, are defined as follows. For all Class B and B1 stations on Channels 221 through 300 inclusive, the F(50,50) field strengths along the protected contours are 0.5 mV/m (54 dBμ) and 0.7 mV/m (57 dBμ), respectively. For all other stations, the F(50,50) field strength along the protected contour is 1.0 mV/m (60 dBμ).

(2) The interfering contours, for the purpose of this section, are defined as follows. For co-channel stations, the F(50,10) field strength along the interfering contour is 20 dB lower than the F(50,50) field strength along the protected contour for which overlap is prohibited. For first adjacent channel stations (±200 kHz), the F(50,10) field strength along the interfering contour

is 6 dB lower than the F(50,50) field strength along the protected contour for which overlap is prohibited. For second adjacent channel stations (±400 kHz), the F(50,10) field strength along the interfering contour is 20 dB higher than the F(50,50) field strength along the protected contour for which overlap is prohibited. For third adjacent channel stations (±600 kHz), the F(50,10) field strength along the interfering contour is 40 dB higher than the F(50,50) field strength along the protected contour for which overlap is prohibited.

(3) The locations of the protected and interfering contours of the proposed station and the other short-spaced assignments, applications and allotments must be determined in accordance with the procedures of paragraphs (c), (d)(2) and (d)(3) of § 73.313, using data for as many radials as necessary to accurately locate the contours.

(b) Applicants requesting short-spaced assignments pursuant to this section must take into account the following factors in demonstrating that contour protection is achieved:

(1) The ERP and antenna HAAT of the proposed station in the direction of the contours of other short-spaced assignments, applications and allotments. If a directional antenna is proposed, the pattern of that antenna must be used to calculate the ERP in particular directions. See § 73.316 for additional requirements for directional antennas.

(2) The ERP and antenna HAAT of other short-spaced assignments, applications and allotments in the direction of the contours of the proposed station. The ERP and antenna HAATs in the directions of concern must be determined as follows:

(i) For vacant allotments, contours are based on the presumed use, at the allotment's reference point, of the maximum ERP that could be authorized for the station class of the allotment, and antenna HAATs in the directions of concern that would result from a non-directional antenna mounted at a standard eight-radial antenna HAAT equal to the reference HAAT for the station class of the allotment.

(ii) For existing stations that were not authorized pursuant to this section, including stations with authorized ERP that exceeds the maximum ERP permitted by § 73.211 for the standard eight-radial antenna HAAT employed, and for applications not requesting authorization pursuant to this section, contours are based on the presumed use of the maximum ERP for the applicable station class (as specified in § 73.211), and the antenna HAATs in the directions of concern that would result from a non-directional antenna mounted at a standard eight-radial antenna HAAT equal to the reference HAAT for the applicable station class, without regard to any other restrictions that may apply (e.g. zoning laws, FAA constraints, application of § 73.213).

(iii) For stations authorized pursuant to this section, except stations with authorized ERP that exceeds the maximum ERP permitted by § 73.211 for the standard eight-radial antenna HAAT employed, contours are based on the use of the authorized ERP in the directions of concern, and HAATs in the directions of concern derived from the authorized standard eight-radial antenna HAAT. For stations with authorized ERP that exceeds the maximum ERP permitted by § 73.211 for the standard eight-radial antenna HAAT employed, authorized under this section, contours are based on the presumed use of the maximum ERP for the applicable station class (as specified in § 73.211), and antenna HAATs in the directions of concern that would result from a non-directional antenna mounted at a standard eight-radial antenna HAAT equal to the reference HAAT for the applicable station class, without regard to any other restrictions that may apply.

(iv) For applications containing a request for authorization pursuant to this section, except for applications to continue operation with authorized ERP that exceeds the maximum ERP permitted by § 73.211 for the standard eight-radial antenna HAAT employed, contours are based on the use of the proposed ERP in the directions of concern, and antenna HAATs in the directions of concern derived from the proposed standard eight-radial antenna HAAT. For applications to continue operation with an ERP that exceeds the maximum ERP permitted by § 73.211 for the standard eight-radial HAAT employed, if processing is requested under this section, contours are based on the presumed use of the maximum ERP for the applicable station class (as specified in § 73.211), and antenna HAATs in the directions of concern that would result from a non-directional antenna mounted at a standard eight-radial antenna HAAT equal to the reference HAAT for the applicable station class, without regard to any other restrictions that may apply.

Note to paragraph (b): Applicants are cautioned that the antenna HAAT in any particular direction of concern will not usually be the same as the standard eight-radial antenna HAAT or the reference HAAT for the station class.

(c) Applications submitted for processing pursuant to this section are not required to propose contour protection of any assignment, application or allotment for which the minimum distance separation requirements of § 73.207 are met, and may, in the directions of those assignments, applications and allotments, employ the maximum ERP permitted by § 73.211 for the standard eight-radial antenna HAAT employed.

(d) Stations authorized pursuant to this section may be subsequently authorized on the basis of compliance with the domestic minimum separation distance requirements of § 73.207, upon filing of an FCC Form 301 or FCC Form 340 (as appropriate) requesting a modification of authorization.

(e) The Commission will not accept applications that specify a short-spaced antenna location for which the following minimum distance separation requirements, in kilometers (miles), are not met:

Relation	Co-channel	200 kHz	400/600 kHz
A to A	82 (51)	42 (26)	25 (16)
A to B1	119 (74)	66 (41)	46 (29)
A to B	143 (89)	88 (55)	67 (42)
A to C2	143 (89)	84 (52)	53 (33)
A to C1	178 (111)	111 (69)	73 (45)
A to C	203 (126)	142 (88)	93 (58)
B1 to B1	138 (86)	88 (55)	48 (30)
B1 to B	175 (109)	114 (71)	69 (43)
B1 to C2	163 (101)	105 (65)	55 (34)
B1 to C1	200 (124)	134 (83)	74 (46)
B1 to C	233 (145)	169 (105)	105 (65)
B to B	211 (131)	145 (90)	71 (44)
B to C2	200 (124)	134 (83)	69 (43)
B to C1	241 (150)	169 (105)	77 (48)
B to C	270 (168)	195 (121)	105 (65)
C2 to C2	163 (101)	105 (65)	55 (34)
C2 to C1	196 (122)	130 (81)	74 (46)
C2 to C	224 (139)	169 (105)	105 (65)
C1 to C1	224 (139)	156 (98)	79 (49)
C1 to C	249 (155)	188 (117)	105 (65)
C to C	270 (168)	209 (130)	105 (65)

Note to paragraph (e): Until further Notice, the Commission will not accept applications that specify short-spaced antenna locations pursuant to this section wherein the proposed distance separation is less than the normally required distance separation in § 73.207 by more than 8 kilometers (5 miles). This temporary restriction will be removed when the Commission determines that available resources are sufficient to allow the timely processing of additional applications proposing short-spaced locations using contour protection.

[54 FR 9802, Mar. 8, 1989, as amended at 54 FR 35340, Aug. 25, 1989]

Effective Date Note: At 54 FR 9802, March 8, 1989, § 73.215 was added. At a later date, the Federal Communications Commission will issue a Public Notice, to be published in the Federal Register, announcing the effective date of this action.

§ 73.220 Restrictions on use of channels.

(a) The frequency 89.1 MHz (channel 206) is revised in the New York City metropolitan area for the use of the United Nations with the equivalent of an antenna height of 150 meters (492 feet) above average terrain and effective radiated power of 20 kWs, and the FCC will make no assignments which would cause objectionable interference with such use.

(b) In Alaska, FM broadcast stations operating on Channels 221-300 (92.1-107.9 MHz) shall not cause harmful interference to and must accept interference from non-Government fixed operations authorized prior to January 1, 1982.

[43 FR 45845, Oct. 4, 1978, as amended at 46 FR 50376, Oct. 13, 1981, 47 FR 30068, July 12, 1982; 48 FR 29507, June 27, 1983]

§ 73.232 Territorial exclusivity.

No licensee of an FM broadcast station shall have any arrangement with a network organization which prevents or hinders another station serving substantially the same area from broadcasting the network's programs not taken by the former station, or which prevents or hinders another station serving a substantially different area from broadcasting any program of the network organization: *Provided, however,* That this section does not prohibit arrangements under which the station is granted first call within its primary service area upon the network's programs. The term "network organization" means any organization originating program material, with or without commercial messages, and furnishing the same to stations interconnected so as to permit simultaneous broadcast by all or some of them. However, arrangements involving only stations under common ownership, or only the rebroadcast by one station or programming from another with no compensation other than a lump-sum payment by the station rebroadcasting, are not considered arrangements with a network organization. The term "arrangement" means any contract, arrangement or understanding, express or implied.

[42 FR 16422, Mar. 28, 1977]

§ 73.239 Use of common antenna site.

No FM broadcast station license or renewal of FM broadcast station license will be granted to any person who owns, leases, or controls a particular site which is peculiarly suitable for FM broadcasting in a particular area and (a) which is not available for use by other FM broadcast station licensees; and (b) no other comparable site is available in the area; and (c) where the exclusive use of such site by the applicant or licensee would unduly limit the number of FM broadcast stations that can be authorized in a particular area or would unduly restrict competition among FM broadcast stations.

[28 FR 13623, Dec. 14, 1963]

§ 73.258 Indicating instruments.

(a) Each FM broadcast station sha be equipped with indicating instr ments which conform with the speci cations described in § 73.1215 for d termining power by the indirec method; for indicating the relative am plitude of the transmission line radi frequency current, voltage, or powe and with such other instruments are necessary for the proper adjus ment, operation, and maintenance o the transmitting system.

(b) The function of each instrumen shall be clearly and permanentl shown in the instrument itself or o the panel immediately adjacent there to.

(c) In the event that any one o these indicating instruments become defective when no substitute which conforms with the required specifica tions is available, the station may b operated without the defective instru ment pending its repair or replace ment for a period not in excess of 6 days without further authority of th FCC: *Provided that,* if the defective in strument is the transmission lin meter of a station which determine the output power by the direc method, the operating power shall b determined by the indirect method i accordance with § 73.267(c) during th entire time the station is operate without the transmission line meter.

(d) If conditions beyond the contro of the licensee prevent the restoratio of the meter to service within th above allowed period, informal reque in accordance with § 73.3549 may b filed with the Engineer in Charge o the radio district in which the statio is located for such additional time a may be required to complete repairs o the defective instrument.

[41 FR 36818, Sept. 1, 1976, as amended a 48 FR 44805, Sept. 30, 1983; 50 FR 3241 Aug. 12, 1985]

§ 73.267 Determining operating power.

(a) The operating power of each FM station is to be determined by either the direct or indirect method.

(b) Direct method. The direc method of power determination for a

FM station uses the indications of a calibrated transmission line meter (responsive to relative voltage, current, or power) located at the RF output terminals of the transmitter. This meter must be calibrated whenever there is any indication that the calibration is inaccurate or whenever any component of the metering circuit is repaired or replaced. The calibration must cover, as a minimum, the range from 90% to 105% of authorized power. The meter calibration may be checked by measuring the power at the transmitter terminals while either:

(1) Operating the transmitter into the transmitting antenna, and determining actual operating power by the indirect method described in § 73.267(c); or

(2) Operating the transmitter into a load (of substantially zero reactance and a resistance equal to the transmission line characteristic impedance) and using an electrical device (within ±5% accuracy) or temperature and coolant flow indicator (within ±4% accuracy) to determine the power.

(3) The calibration must cover, as a minimum, the range from 90% to 105% of authorized power and the meter must provide clear indications which will permit maintaining the operating power within the prescribed tolerance or the meter shall be calibrated to read directly in power units.

(c) *Indirect method.* The operating power is determined by the indirect method by applying an appropriate factor to the input power to the last radio-frequency power amplifier stage of the transmitter, using the following formula:

Transmitter output power = Ep x Ip x *F*

Where:

Ep = DC input voltage of final radio stage.
Ip = Total DC input current of final radio stage.
F = Efficiency factor.

(1) If the above formula is not appropriate for the design of the transmitter final amplifier, use a formula specified by the transmitter manufacturer with other appropriate operating parameters.

(2) The value of the efficiency factor, *F*, established for the authorized transmitter output power is to be used for maintaining the operating power, even though there may be some variation in *F* over the power operating range of the transmitter.

(3) The value of *F* is to be determined and a record kept thereof by one of the following procedures listed in order of preference:

(i) Using the most recent measurement data for calibration of the transmission line meter according to the procedures described in paragraph (b) of this section or the most recent measurements made by the licensee establishing the value of *F*. In the case of composite transmitters or those in which the final amplifier stages have been modified pursuant to FCC approval, the licensee must furnish the FCC and also retain with the station records the measurement data used as a basis for determining the value of *F*.

(ii) Using measurement data shown on the transmitter manufacturer's test data supplied to the licensee; *Provided*, That measurements were made at the authorized frequency and transmitter output power.

(iii) Using the transmitter manufacturer's measurement data submitted to the FCC for type acceptance and as shown in the instruction book supplied to the licensee.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[44 FR 58731, Oct. 11, 1979, as amended at 45 FR 28141, Apr. 28, 1980; 48 FR 38479, Aug. 24, 1983; 49 FR 4210, Feb. 3, 1984; 49 FR 49851, Dec. 24, 1984]

§ 73.277 Permissible transmissions.

(a) No FM broadcast licensee or permittee shall enter into any agreement, arrangement or understanding, oral or written, whereby it undertakes to supply, or receives consideration for supplying, on its main channel a functional music, background music, or other subscription service (including storecasting) for reception in the place or places of business of any subscriber.

(b) The transmission (or interruption) of radio energy in the FM broadcast band is permissible only pursuant to a station license, program test authority, construction permit, or experimental authorization and the provisions of this part of the rules.

[29 FR 7471, June 10, 1964. Redesignated at 39 FR 38655, Nov. 1, 1974 and amended at 48 FR 28454, June 22, 1983]

§ 73.293 Use of FM multiplex subcarriers.

Licensees of FM broadcast stations may transmit, without further authorization, subcarrier communication services in accordance with the provisions of §§ 73.319 and 73.322.

[51 FR 17028, May 8, 1986]

§ 73.295 FM subsidiary communications services.

(a) Subsidiary communications services are those transmitted on a subcarrier within the FM baseband signal, but do not include services which enhance the main program broadcast service (see § 73.293(a)(d)) or exclusively relate to station operations (see § 73.293(c)). Subsidiary communications include, but are not limited to services such as functional music, specialized foreign language programs, radio reading services, utility load management, market and financial data and news, paging and calling, traffic control signal switching, bilingual television audio, and point to point or multipoint messages.

(b) FM subsidiary communications services that are common carrier in nature are subject to common carrier regulation. Licensees operating such services are required to apply to the FCC for the appropriate authorization and to comply with all policies and rules applicable to the service. Responsibility for making the initial determinations of whether a particular activity is common carriage rests with the FM station licensee. Initial determinations by licensees are subject to FCC examination and may be reviewed at the FCC's discretion.

(c) Subsidiary communications services are of a secondary nature under the authority of the FM station authorization, and the authority to provide such communications services may not be retained or transferred in any manner separate from the station's authorization. The grant or renewal of an FM station permit or license is not furthered or promoted by proposed or past services. The permittee or licensee must establish that the broadcast operation is in the public interest wholly apart from the subsidiary communications services provided.

(d) The station identification, delayed recording and sponsor identification announcements required by §§ 73.1201, 73.1208, and 73.1212 are not applicable to material transmitted under an SCA.

(e) The licensee or permittee must retain control over all material transmitted in a broadcast mode via the station's facilities, with the right to reject any material that it deems inappropriate or undesirable.

[48 FR 28454, June 22, 1983, as amended at 48 FR 44805, Sept. 30, 1983; 49 FR 336 Aug. 15, 1984; 50 FR 32416, Aug. 12, 1985]

§ 73.297 FM stereophonic sound broadcasting.

(a) An FM broadcast station may, without specific authority from the FCC, transmit stereophonic (biphonic, quadraphonic, etc.) sound programs upon installation of stereophonic sound transmitting equipment under the provisions of §§ 2.1001, 73.322, and 73.1590 of the Rules. Prior to commencement of stereophonic sound broadcasting, equipment performance measurements must be made to ensure that the transmitted signal complies with all applicable rules and standards.

(b) Each licensee or permittee engaging in multichannel broadcasting must measure the pilot subcarrier frequency as often as necessary to ensure that it is kept at all times within 2 Hz of the authorized frequency.

[48 FR 28454, June 22, 1983, and 48 FR 38479, Aug. 24, 1983]

§ 73.310 FM technical definitions.

(a) *Frequency modulation.*

Antenna height above average terrain (HAAT). HAAT is calculated by determining the average of the antenna heights above the terrain from 3 to 16 kilometers (2 to 10 miles) from the antenna for the eight directions evenly spaced for each 45° of azimuth starting with True North (a different antenna height will be determined in each direction from the antenna): and computing the average of these separate heights. In some cases less than eight directions may be used. (Se

§ 73.313(d).) Where circular or elliptical polarization is used, the antenna height above average terrain must be based upon the height of the radiation of the antenna that transmits the horizontal component of radiation.

Antenna power gain. The square of the ratio of the root-mean-square (RMS) free space field strength produced at 1 kilometer in the horizontal plane in millivolts per meter for 1 kW antenna input power to 221.4 mV/m. This ratio is expressed in decibels (dB). If specified for a particular direction, antenna power gain is based on that field strength in the direction only.

Center frequency. The term "center frequency" means:

(1) The average frequency of the emitted wave when modulated by a sinusoidal signal.

(2) The frequency of the emitted wave without modulation.

Composite baseband signal. A signal which is composed of all program and other communications signals that frequency modulates the FM carrier.

Effective radiated power. The term "effective radiated power" means the product of the antenna power (transmitter output power less transmission line loss) times: (1) The antenna power gain, or (2) the antenna field gain squared. Where circular or elliptical polarization is employed, the term effective radiated power is applied separately to the horizontal and vertical components of radiation. For allocation purposes, the effective radiated power authorized is the horizontally polarized component of radiation only.

Equivalent isotropically radiated power (EIRP). The term "equivalent isotropically radiated power (also known as "effective radiated power above isotropic) means the product of the antenna input power and the antenna gain in a given direction relative to an isotropic antenna.

FM Blanketing. Blanketing is that form of interference to the reception of other broadcast stations which is caused by the presence of an FM broadcast signal of 115 dBu (562 mV/m) or greater signal strength in the area adjacent to the antenna of the transmitting station. The 115 dBu contour is referred to as the blanketing contour and the area within this contour is referred to as the blanketing area.

FM broadcast band. The band of frequencies extending from 88 to 108 MHz, which includes those assigned to noncommercial educational broadcasting.

FM broadcast channel. A band of frequencies 200 kHz wide and designated by its center frequency. Channels for FM broadcast stations begin at 88.1 MHz and continue in successive steps of 200 kHz to and including 107.9 MHz.

FM broadcast station. A station employing frequency modulation in the FM broadcast band and licensed primarily for the transmission of radiotelephone emissions intended to be received by the general public.

Field strength. The electric field strength in the horizontal plane.

Free space field strength. The field strength that would exist at a point in the absence of waves reflected from the earth or other reflecting objects.

Frequency departure. The amount of variation of a carrier frequency or center frequency from its assigned value.

Frequency deviation. The peak difference between modulated wave and the carrier frequency.

Frequency modulation. A system of modulation where the instantaneous radio frequency varies in proportion to the instantaneous amplitude of the modulating signal (amplitude of modulating signal to be measured after preemphasis, if used) and the instantaneous radio frequency is independent of the frequency of the modulating signal.

Frequency swing. The peak difference between the maximum and the minimum values of the instantaneous frequency of the carrier wave during wave during modulation.

Multiplex transmission. The term "multiplex transmission" means the simultaneous transmission of two or more signals within a single channel. Multiplex transmission as applied to FM broadcast stations means the transmission of facsimile or other signals in addition to the regular broadcast signals.

Percentage modulation. The ratio of the actual frequency deviation to the frequency deviation defined as 100% modulation, expressed in percentage. For FM broadcast stations, a frequency deviation of ±75kHz is defined as 100% modulation.

(b) *Stereophonic sound broadcasting.*

Cross-talk. An undesired signal occurring in one channel caused by an electrical signal in another channel.

FM stereophonic broadcast. The transmission of a stereophonic program by a single FM broadcast station utilizing the main channel and a stereophonic subchannel.

Left (or right) signal. The electrical output of a microphone or combination of microphones placed so as to convey the intensity, time, and location of sounds originating predominately to the listener's left (or right) of the center of the performing area.

Left (or right) stereophonic channel. The left (or right) signal as electrically reproduced in reception of FM stereophonic broadcasts.

Main channel. The band of frequencies from 50 to 15,000 Hz which frequency-modulate the main carrier.

Pilot subcarrier. A subcarrier that serves as a control signal for use in the reception of FM stereophonic sound broadcasts.

Stereophonic separation. The ratio of the electrical signal caused in sound channel A to the signal caused in sound channel B by the transmission of only a channel B signal. Channels A and B may be any two channels of a stereophonic sound broadcast transmission system.

Stereophonic sound. The audio information carried by plurality of channels arranged to afford the listener a sense of the spatial distribution of sound sources. Stereophonic sound broadcasting includes, but is not limited to, biphonic (two channel), triphonic (three channel) and quadrophonic (four channel) program services.

Stereophonic sound subcarrier. A subcarrier within the FM broadcast baseband used for transmitting signals for stereophonic sound reception of the main broadcast program service.

Stereophonic sound subchannel. T band of frequencies from 23 kHz to kHz containing sound subcarriers their associated sidebands.

(c) *Visual transmissions.* Commu cations or message transmitted on subcarrier intended for reception a visual presentation on a view screen, teleprinter, facsimile print or other form of graphic display record.

(d) *Control and telemetry transm sions.* Signals transmitted on a mul plex subcarrier intended for any for of control and switching functions for equipment status data and aural visual alarms.

[28 FR 13623, Dec. 14, 1963, as amended 39 FR 10575, Mar. 21, 1974; 44 FR 36 June 20, 1979; 48 FR 28454, June 22, 19 48 FR 29507, June 27, 1983; 48 FR 37 Aug. 17, 1983; 49 FR 45145, Nov. 15, 1984]

§ 73.311 Field strength contours.

(a) Applications for FM broadca authorizations must show two fie strength contours. These are the dBu (3.16 mV/m) and the 60 dBu mV/m) contours. These contours ind cate only the approximate extent coverage over average terrain in th absence of interference. Under actu conditions, the true coverage may va greatly from these estimates becau the terrain over any specific path expected to be different from the ave age terrain on which the fie strength chart was based. Because these factors the estimated contou give no assurance of service to any sp cific percentage of receiver locatio within the distances indicated.

(b) The field strength contours pr vided for in this section shall be co sidered for the following purpo only:

(1) In the estimation of coverage r sulting from the selection of a partic lar transmitter site by an applicant f an FM broadcast station.

(2) In connection with problems coverage arising out of application § 73.3555.

(3) In determining compliance w § 73.315(a) concerning the minimu field strength to be provided over th principal community to be served.

[28 FR 13623, Dec. 14, 1963, as amended at 31 FR 10126, July 27, 1966; 32 FR 11471, Aug. 9, 1967; 52 FR 10570, Apr. 2, 1987]

EFFECTIVE DATE NOTE: At 54 FR 9802, March 8, 1989, § 73.311 was amended by revising paragraph (a) and adding a new paragraph (b)(4). At a later date, the Federal Communications Commission will issue a Public Notice, to be published in the Federal Register, announcing the effective date of this action. For the convenience of the user, the new paragraphs (a) and (b)(4) are set forth as follows:

§ 73.311 **Field strength contours.**

(a) Applications for FM broadcast authorizations must show the field strength contours required by FCC Form 301 or FCC Form 340, as appropriate.

(b) * * *

(4) In determining compliance with § 73.215 concerning contour protection.

§ 73.312 Topographic data.

(a) In the preparation of the profile graphs previously described, and in determining the location and height above mean sea level of the antenna site, the elevation or contour intervals shall be taken from United States Geological Survey Topographic Quadrangle Maps, United States Army Corps of Engineers Maps or Tennessee Valley Authority maps, whichever is the latest, for all areas for which such maps are available. If such maps are not published for the area in question, the next best topographic information should be used. Topographic data may sometimes be obtained from state and municipal agencies. The data from the Sectional Aeronautical Charts (including bench marks) or railroad depot elevations and highway elevations from road maps may be used where no better information is available. In cases where limited topographic data can be obtained, use may be made of an altimeter in a car driven along roads extending generally radially from the transmitter site.

(b) The Commission will not ordinarily require the submission of topographical maps for areas beyond 15 miles from the antenna site, but the maps must include the principal city or cities to be served. If it appears necessary additional data may be requested.

(c) The U.S. Geological Survey Topography Quadrangle Sheets may be obtained from the U.S. Geological Survey Department of the Interior, Washington, DC 20240. The Sectional Aeronautical Charts are available from the U.S. Coast and Geodetic Survey, Department of Commerce, Washington, DC 20235. These maps may also be secured from branch offices and from authorized agents or dealers in most principal cities.

(d) In lieu of maps, the average terrain elevation may be computer generated except in cases of dispute, using elevations from a 30 second, point or better topographic data file. The file must be identified and the data processed for intermediate points along each radial using linear interpolation techniques. The height above mean sea level of the antenna site must be obtained manually using appropriate topographic maps.

[28 FR 13623, Dec. 14, 1963, as amended at 31 FR 10126, July 27, 1966; 49 FR 48937, Dec. 17, 1984]

§ 73.313 Prediction of coverage.

(a) All predictions of coverage made pursuant to this section shall be made without regard to interference and shall be made only on the basis of estimated field strengths.

(b) Predictions of coverage shall be made only for the same purposes as relate to the use of field strength contours as specified in § 73.311.

(c) In predicting the distance to the field strength contours, the F(50,50) field strength chart, Figure 1 of § 73.333 must be used. The 50% field strength is defined as that value exceeded for 50% of the time.

(1) The F(50,50) chart gives the estimated 50% field strengths exceeded at 50% of the locations in dB above 1 uV/m. The chart is based on an effective power radiated from a half-wave dipole antenna in free space, that produces an unattenuated field strength at 1 kilometer of about 107 dB above 1 uV/m (221.4 mV/m).

(2) To use the chart for other ERP values, convert the ordinate scale by the appropriate adjustment in dB. For example, the ordinate scale for an ERP of 50 kW (17 dBk) should be adjusted by 17 dB and, therefore, a field strength of 40 dBu would be converted

to 57 dBu. When predicting the distance to field strength contours, use the maximum ERP of the main radiated lobe in the pertinent azimuthal direction. When predicting field strengths over areas not in the plane of the maximum main lobe, use the ERP in the direction of such areas, determined by considering the appropriate vertical radiation pattern.

(d) The antenna height to be used with this chart is the height of the radiation center of the antenna above the average terrain along the radial in question. In determing the average elevation of the terrain, the elevations between 3 and 16 kilometers from the antenna site are used.

(1) Profile graphs must be drawn for eight radials beginning at the antenna site and extending 16 kilometers therefrom. The radials should be drawn for each 45° of azimuth starting with True North. At least one radial must include the principal community to be served even though it may be more than 16 kilometers from the antenna site. However, in the event none of the evenly spaced radials include the principal community to be served, and one or more such radials are drawn in addition, these radials must not be used in computing the antenna height above average terrain.

(2) Where the 3 to 16 kilometers portion of a radial extends in whole or in part over a large body of water or extends over foreign territory but the 50 uV/m contour encompasses land area within the United States beyond the 16 kilometers portion of the radial, the entire 3 to 16 kilometers portion of the radial must be included in the computation of antenna height above average terrain. However, where the 50 uV/m contour does not so encompass United States land area and (i) the entire 3 to 16 kilometers portion of the radial extends over large bodies of water or foreign territory, such radial must be completely omitted from the computation of antenna height above average terrain, and (ii) where a part of the 3 to 16 kilometers portion of a radial extends over large bodies of water or foreign territory, only that part of the radial extending from the 3 kilometers sector to the outermost portion of land area within the United States covered by the radial must be used in the computation of antenna height above average terrain.

(3) The profile graph for each radial should be plotted by contour intervals of from 12 to 30 meters and, where the data permits, at least 50 points of elevation (generally uniformly spaced) should be used for each radial. In instances of very rugged terrain where the use of contour intervals of 3 meters would result in several points in a short distance, 60 or 120 meter contour intervals may be used for such distances. On the other hand, where the terrain is uniform or gently sloping the smallest contour interval indicated on the topographic map should be used, although only relatively few points may be available. The profile graph should indicate the topography accurately for each radial, and the graphs should be plotted with the distance in kilometers as the abscissa and the elevation in meters above mean sea level as the ordinate. The profile graphs should indicate the source of the topographical data used. The graph should also show the elevation of the center of the radiating system. The graph may be plotted either on rectangular coordinate paper or on special paper that shows the curvature of the earth. It is not necessary to take the curvature of the earth into consideration in this procedure as this factor is taken care of in the charts showing signal strengths. The average elevation of the 13 kilometer distance between 3 and 16 kilometers from the antenna site should then be determined from the profile graph for each radial. This may be obtained by averaging a large number of equally spaced points, by using a planimeter or by obtaining the median elevation (that exceeded for 50% of the distance) in sectors and averaging those values.

(4) Examples of HAAT calculations.

(i) The heights above average terrain on the eight radials are as follows:

	Meters
0°	
45°	
90°	

	Meters
135°	90
180°	−10
225°	−85
270°	40
315°	85

The antenna height above terrain (defined in § 73.310(a)) is computed as follows:

(120+255+185+90−10−85+40+85)/8=85 meters.

(ii) Same as paragraph (d)(4)(i) of this section, except the 0° radial is entirely over sea water. The antenna height above average terrain is computed as follows (note that the divisor is 7 not 8):

(255+185+90−10−85+40+85)/7=80 meters.

(iii) Same as paragraph (d)(4)(i) of this section, except that only the first 10 kilometers of the 90° radial are in the United States; beyond 10 kilometers the 90° radial is in a foreign country. The height above average terrain of the 3 to 10 kilometer portion of the 90° radial is 105 meters. The antenna height above average terrain is computed as follows (note that the divisor is 8 not 7.5):

(120+255+105+90−10−85+40+85)/8=75 meters.

(e) In cases where the terrain in one or more directions from the antenna site departs widely from the average elevation of the 3 to 16 kilometer sector, the prediction method may indicate contour distances that are different from what may be expected in practice. For example, a mountain ridge may indicate the practical limit of service although the prediction method may indicate otherwise. In such cases, the prediction method should be followed, but a supplemental showing may be made concerning the contour distances as determined by other means. Such supplemental showings should describe the procedure used and should include sample calculations. Maps of predicted coverage should include both the coverage as predicted by the regular method and as predicted by a supplemental method. When measurements of area are required, these should include the area obtained by the regular prediction method and the area obtained by the supplemental method. In directions where the terrain is such that antenna heights less than 30 meters for the 3 to 16 kilometer sector are obtained, an assumed height of 30 meters must be used for the prediction of coverage. However, where the actual contour distances are critical factors, a supplemental showing of expected coverage must be included together with a description of the method used in predicting such coverage. In special cases, the FCC may require additional information as to terrain and coverage.

(f) The effect of terrain roughness on the predicted field strength of a signal at points distant from an FM transmitting antenna is assumed to depend on the magnitude of a terrain roughness factor (h) which, for a specific propagation path, is determined by the characteristics of a segment of the terrain profile for that path 40 kilometers in length located between 10 and 50 kilometers from the antenna. The terrain roughness factor has a value equal to the distance, in meters, between elevations exceeded by all points on the profile for 10% and 90% respectively, of the length of the profile segment. (See § 73.333, Figure 4.)

(g) If the lowest field strength value of interest is initially predicted to occur over a particular propagation path at a distance that is less than 50 kilometers from the antenna, the terrain profile segment used in the determination of terrain roughness factor over that path must be that included between points 10 kilometers from the transmitter and such lesser distances. No terrain roughness correction need be applied when all field strength values of interest are predicted to occur 10 kilometers or less from the transmitting antenna.

(h) Profile segments prepared for terrain roughness factor determinations are to be plotted in rectangular coordinates, with no less than 50 points evenly spaced within the segment using data obtained from topographic maps with contour intervals of approximately 15 meters (50 feet) or less if available.

(i) The field strength charts (§ 73.333, Figs. 1-1a) were developed assuming a terrain roughness factor of 50 meters, which is considered to be representative of average terrain in the United States. Where the roughness factor for a particular propagation path is found to depart appreciably from this value, a terrain roughness correction (ΔF) should be applied to field strength values along this path, as predicted with the use of these charts. The magnitude and sign of this correction, for any value of Δh, may be determined from a chart included in § 73.333 as Figure 5.

(j) Alternatively, the terrain roughness correction may be computed using the following formula:

$$\Delta F = 1.9 - 0.03(\Delta h)(1 + f/300)$$

Where:

ΔF=terrain roughness correction in dB
Δk=terrain roughness factor in meters
f=frequency of signal in MHz (MHz)

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[28 FR 13623, Dec. 14, 1963, as amended at 40 FR 27678, July 1, 1975; 48 FR 29507, June 27, 1983; 52 FR 11655, Apr. 10, 1987; 52 FR 37789, Oct. 9, 1987]

EFFECTIVE DATE NOTE: At 42 FR 25736, May 19, 1977, the effective date of § 73.313 paragraphs (i) and (j) was stayed indefinitely.

§ 73.314 Field strength measurements.

(a) Except as provided for in § 73.209, FM broadcast stations shall not be protected from any type of interference or propagation effect. Persons desiring to submit testimony, evidence or data to the Commission for the purpose of showing that the technical standards contained in this subpart do not properly reflect the levels of any given type of interference or propagation effect may do so only in appropriate rule making proceedings concerning the amendment of such technical standards. Persons making field strength measurements for formal submission to the Commission in rule making proceedings, or making such measurements upon the request of the Commission, shall follow the procedure for making and reporting such measurements outlined in paragraph (b) of this section. In instances where a showing of the measured level of a signal prevailing over a speci
community is appropriate, the proc
dure for making and reporting fie
strength measurements for this pu
pose is set forth in paragraph (c)
this section.

(b) Collection of field strength da
for propagation analysis.

(1) *Preparation for measuremen*
(i) On large scale topographic ma
eight or more radials are drawn fro
the transmitter location to the ma
mum distance at which measuremen
are to be made, with the angles inclu
ed between adjacent radials of a
proximately equal size. Radials shou
be oriented so as to traverse represen
ative types of terrain. The speci
number of radials and their orienta
tion should be such as to accomplis
this objective.

(ii) Each radial is marked, at a poi
exactly 16 kilometers from the tra
mitter and, at greater distances,
successive 3 kilometer interva
Where measurements are to be co
ducted over extremely rugged terra
shorter intervals may be used, but
such intervals must be of equal leng
Accessible roads intersecting ea
radial as nearly as possible at each
kilometer marker are selected. The
intersections are the points on th
radial at which measurements are
be made, and are referred to sub
quently as measuring locations. Th
elevation of each measuring locatio
should approach the elevation at th
corresponding 3 kilometer marker
nearly as possible.

(2) *Measurement procedure.*
measurements must be made utilizin
a receiving antenna designed for r
ception of the horizontally polariz
signal component, elevated 9 mete
above the roadbed. At each measurin
location, the following procedure mu
be used:

(i) The instrument calibration
checked.

(ii) The antenna is elevated to
height of 9 meters.

(iii) The receiving antenna is rotate
to determine if the strongest signal
arriving from the direction of th
transmitter.

(iv) The antenna is oriented so tha
the sector of its response pattern ove

which maximum gain is realized is in the direction of the transmitter.

(v) A mobile run of at least 30 meters is made, that is centered on the intersection of the radial and the road, and the measured field strength is continuously recorded on a chart recorder over the length of the run.

(vi) The actual measuring location is marked exactly on the topographic map, and a written record, keyed to the specific location, is made of all factors which may affect the recorded field, such as topography, height and types of vegetation, buildings, obstacles, weather, and other local features.

(vii) If, during the test conducted as described in paragraph (b)(2)(iii) of this section, the strongest signal is found to come from a direction other than from the transmitter, after the mobile run prescribed in paragraph (b)(2)(v) of this section is concluded, additional measurements must be made in a "cluster" of at least five fixed points. At each such point, the field strengths with the antenna oriented toward the transmitter, and with the antenna oriented so as to receive the strongest field, are measured and recorded. Generally, all points should be within 60 meters of the center point of the mobile run.

(viii) If overhead obstacles preclude a mobile run of at least 30 meters, a "cluster" of five spot measurements may be made in lieu of this run. The first measurement in the cluster is identified. Generally, the locations for other measurements must be within 60 meters of the location of the first.

(3) *Method of reporting measurements.* A report of measurements to the Commission shall be submitted in affidavit form, in triplicate, and should contain the following information:

(i) Tables of field strength measurements, which, for each measuring location, set forth the following data:

(A) Distance from the transmitting antenna.

(B) Ground elevation at measuring location.

(C) Date, time of day, and weather.

(D) Median field in dBu for 0 dBk, for mobile run or for cluster, as well as maximum and minimum measured field strengths.

(E) Notes describing each measuring location.

(ii) U.S. Geological Survey topographic maps, on which is shown the exact location at which each measurement was made. The original plots shall be made on maps of the largest available scale. Copies may be reduced in size for convenient submission to the Commission, but not to the extent that important detail is lost. The original maps shall be made available, if requested. If a large number of maps is involved, an index map should be submitted.

(iii) All information necessary to determine the pertinent characteristics of the transmitting installation, including frequency, geographical coordinates of antenna site, rated and actual power output of transmitter, measured transmission line loss, antenna power gain, height of antenna above ground, above mean sea level, and above average terrain. The effective radiated power should be computed, and horizontal and vertical plane patterns of the transmitting antenna should be submitted.

(iv) A list of calibrated equipment used in the field strength survey, which, for each instrument, specifies its manufacturer, type, serial number and rated accuracy, and the date of its most recent calibration by the manufacturer, or by a laboratory. Complete details of any instrument not of standard manufacture shall be submitted.

(v) A detailed description of the calibration of the measuring equipment, including field strength meters, measuring antenna, and connecting cable.

(vi) Terrain profiles in each direction in which measurements were made, drawn on curved earth paper for equivalent 4/3 earth radius, of the largest available scale.

(c) Collection of field strength data to determine FM broadcast service in specific communities.

(1) *Preparation for measurement.* (i) The population (P) of the community, and its suburbs, if any, is determined by reference to an appropriate source, e.g., the 1970 U.S. Census tables of population of cities and urbanized areas.

(ii) The number of locations at which measurements are to be made shall be at least 15, and shall be approximately equal to $0.1(P)^{1/2}$, if this product is a number greater than 15.

(iii) A rectangular grid, of such size and shape as to encompass the boundaries of the community is drawn on an accurate map of the community. The number of line intersections on the grid included within the boundaries of the community shall be at least equal to the required number of measuring locations. The position of each intersection on the community map determines the location at which a measurement shall be made.

(2) *Measurement procedure.* All measurements must be made using a receiving antenna designed for reception of the horizontally polarized signal component, elevated 9 meters above ground level.

(i) Each measuring location shall be chosen as close as feasible to a point indicated on the map, as previously prepared, and at as nearly the same elevation as that point as possible.

(ii) At each measuring location, after equipment calibration and elevation of the antenna, a check is made to determine whether the strongest signal arrives from a direction other than from the transmitter.

(iii) At 20 percent or more of the measuring locations, mobile runs, as described in paragraph (b)(2) of this section shall be made, with no less than three such mobile runs in any case. The points at which mobile measurements are made shall be well separated. Spot measurements may be made at other measuring points.

(iv) Each actual measuring location is marked exactly on the map of the community, and suitably keyed. A written record shall be maintained, describing, for each location, factors which may affect the recorded field, such as the approximate time of measurement, weather, topography, overhead wiring, heights and types of vegetation, buildings and other structures. The orientation, with respect to the measuring location shall be indicated of objects of such shape and size as to be capable of causing shadows or reflections. If the strongest signal received was found to arrive from a direction other than that of the transmitter, this fact shall be recorded.

(3) *Method of reporting mea* *ments.* A report of measurements the Commission shall be submitted affidavit form, in triplicate, should contain the following infor tion:

(i) A map of the community show each actual measuring location, spe ically identifying the points at whi mobile runs were made.

(ii) A table keyed to the above m showing the field strength at e measuring point, reduced to dBu the actual effective radiated power the station. Weather, date, and time each measurement shall be indicated

(iii) Notes describing each measuri location.

(iv) A topographic map of the la est available scale on which marked the community and the tra mitter site of the station whose signa have been measured, which includ all areas on or near the direct path signal propagation.

(v) Computations of the mean a standard deviation of all measur field strengths, or a graph on whi the distribution of measured fie strength values is plotted.

(vi) A list of calibrated equipme used for the measurements, which f each instrument, specifies its manufa turer, type, serial number and rat accuracy, and the date of its mo recent calibration by the manufactu er, or by a laboratory. Complete d tails of any instrument not of stan ard manufacture shall be submitted

(vii) A detailed description of th procedure employed in the calibratio of the measuring equipment, includin field strength meters, measuring a tenna, and connecting cable.

[40 FR 27682, July 1, 1975; 40 FR 2880 July 9, 1975, as amended at 48 FR 2950 June 27, 1983]

§ 73.315 FM transmitter location.

(a) The transmitter location shall b chosen so that, on the basis of the e fective radiated power and antenn height above average terrain em ployed, a minimum field strength of 7 dB above one uV/m (dBu), or 3.1 mV/m, will be provided over the entir principal community to be served.

NOTE: The requirements of paragraph (a) of this section do not apply to noncommercial educational FM broadcast stations operating on reserved channels. (Channels 200 through 220)

(b) The transmitter location should be chosen to maximize coverage to the city of license while minimizing interference. This is normally accomplished by locating in the least populated area available while maintaining the provisions of paragraph (a) of this section. In general, the transmitting antenna of a station should be located in the most sparsely populated area available at the highest elevation available. The location of the antenna should be so chosen that line-of-sight can be obtained from the antenna over the principle city or cities to be served; in no event should there be a major obstruction in this path.

(c) The transmitting location should be selected so that the 1 mV/m contour encompasses the urban population within the area to be served. It is recognized that topography, shape of the desired service area, and population distribution may make the choice of a transmitter location difficult. In such cases consideration may be given to the use of a directional antenna system, although it is generally preferable to choose a site where a nondirectional antenna may be employed.

(d) In cases of questionable antenna locations it is desirable to conduct propagation tests to indicate the field strength expected in the principal city or cities to be served and in other areas, particularly where severe shadow problems may be expected. In considering applications proposing the use of such locations, the Commission may require site tests to be made. Such tests should include measurements made in accordance with the measurement procedures described in § 73.314, and full data thereon shall be supplied to the Commission. The test transmitter should employ an antenna having a height as close as possible to the proposed antenna height, using a balloon or other support if necessary and feasible. Information concerning the authorization of site tests may be obtained from the Commission upon request.

(e) Cognizance must of course be taken regarding the possible hazard of the proposed antenna structure to aviation and the proximity of the proposed site to airports and airways. Procedures and standards with respect to the Commission's consideration of proposed antenna structures which will serve as a guide to persons intending to apply for radio station licenses are contained in Part 17 of this chapter (Construction, Marking, and Lighting of Antenna Structures).

[28 FR 13623, Dec. 14, 1963, as amended at 41 FR 22943, June 8, 1976; 49 FR 38131, Sept. 27, 1984; 49 FR 45146, Nov. 15, 1984; 51 FR 9965, Mar. 24, 1986; 52 FR 10570, Apr. 2, 1987]

§ 73.316 FM antenna systems.

(a) It shall be standard to employ horizontal polarization; however, circular or elliptical polarization may be employed if desired. Clockwise or counterclockwise rotation may be used. The supplemental vertically polarized effective radiated power required for circular or elliptical polarization shall in no event exceed the effective radiated power authorized.

(b) *Directional antennas.* A directional antenna is considered to be an antenna that is designed or altered for the purpose of obtaining a noncircular radiation pattern. Directional antennas may not be used for the purpose of reducing minimum mileage separation requirements but may be employed for the purpose of improving service or for the purpose of using a particular site; directional antennas with a ratio of maximum to minimum radiation in the horizontal plane of more than 15 dB will not be permitted.

(c) *Applications for directional antennas.* Applications proposing the use of directional antenna systems must be accompanied by the following:

(1) Complete description of the proposed antenna system, including:

(i) A description of the means whereby the directivity is proposed to be obtained, and

(ii) The means (such as a rotatable reference antenna) whereby the operational antenna pattern will be determined prior to licensed operation and maintained within proper tolerances thereafter.

(2) Horizontal and vertical plane radiation patterns showing the free space field strength in mV/m at 1 mile and effective radiated power in dbk for each direction. If directivity was computed, the showing shall include the method by which the radiation patterns were computed, including formulae used, sample calculations and tabulations of data. If the directivity was measured, the method employed shall be fully described, including the equipment used, and the resultant measured data shall be tabulated. Sufficient vertical patterns shall be included to indicate clearly the radiation characteristics of the antenna above and below the horizontal plane. Complete information and patterns shall be provided for angles of ±10° from the horizontal plane and sufficient additional information included on that portion of the pattern lying between +10° and the zenith and −10° and the nadir, to conclusively demonstrate the absence of undesirable lobes in these areas. The horizontal plane pattern shall be plotted on polar coordinate paper with reference to True North. The vertical plane pattern shall be plotted on rectangular coordinate paper with reference to the horizontal plane.

(3) Name, address, and qualifications of the engineer making the calculations.

(d) Applications proposing the use of FM transmitting antennas in the immediate vicinity (*i.e.* 60 meters or less) of other FM or TV broadcast antennas must include a showing as to the expected effect, if any, of such approximate operation.

(e) In cases where it is proposed to use a tower of a AM broadcast station as a supporting structure for an FM broadcast antenna, an application for construction permit (or modification of construction permit) for such AM broadcast station must be filed for consideration with the FM application, only in the event the overall height of the AM broadcast station tower changes. Applications may be required for other classes of stations when their towers are to be used in connection with FM stations.

(f) When an FM broadcast anten
is mounted on a nondirectional A
broadcast antenna, new resistan
measurements must be made of t
AM broadcast antenna after instal
tion and testing of the FM broadc
antenna. During the installation a
until the new resistance determinati
is approved, the AM broadcast static
licensee should operate by the indire
method of power determination. T
FM broadcast license application w
not be considered until the applicati
form concerning resistance measur
ments is filed for the AM broadca
station.

(g) When an FM broadcast anten
is mounted on an element of a A
broadcast directional antenna, a f
engineering study concerning t
effect of the FM broadcast antenna
the directional pattern must be fil
with the application concerning t
AM broadcast station. Dependi
upon the individual case, the Commi
sion may require readjustment a
certain field strength measuremen
of the AM broadcast station followi
the completion of the FM broadca
antenna system.

(h) When the proposed FM antenn
is to be mounted on a tower in the v
cinity of an AM station directional a
tenna system and it appears that t
operation of the directional antenn
system may be affected, an enginee
ing study must be filed with the F
application concerning the effect
the FM antenna on the AM directio
al radiation pattern. Field streng
measurements of the AM station ma
be required prior to and following co
struction of the FM station antenn
and readjustments made as necessar

(i) Information regarding data r
quired in connection with AM broa
cast directional antenna systems ma
be found in § 73.150 of this chapte
(See also AM Broadcast Technic
Standards.)

[28 FR 13623, Dec. 14, 1963, as amended
34 FR 14222, Sept. 10, 1969; 37 FR 2
Dec. 5, 1972; 43 FR 53738, Nov. 17, 1978;
FR 29508, June 27, 1983; 51 FR 17028, M
8, 1986]

EFFECTIVE DATE NOTE: At 54 FR
March 8, 1989, § 73.316 was amended by
vising paragraphs (b), (c)(1), (c)(2), a
(c)(3), and by adding paragraphs (c)(

(c)(5), (c)(6), (c)(7), and (c)(8). At a later date, the Federal Communications Commission will issue a Public Notice, to be published in the Federal Register, announcing the effective date of this action. For the convenience of the user, the new text is set forth as follows:

§ 73.316 FM antenna systems.

* * * * *

(b) *Directional antennas.* A directional antenna is an antenna that is designed or altered for the purpose of obtaining a non-circular radiation pattern.

(1) Directional antennas that have a ratio of maximum to minimum radiation in the horizontal plane of more than 15 dB will not be authorized.

(2) Directional antennas that have a radiation pattern which varies more than 2 dB per 10 degrees of azimuth will not be authorized.

(c) * * *

(1) A complete description of the proposed antenna system, including the manufacturer and model number of the proposed directional antenna. It is not sufficient to label the antenna with only a generic term such as "dipole". A specific model number must be provided. In the case of individually designed antennas with no model number, or in the case of a composite antenna composed of two or more individual antennas, the antenna must be described as a "custom" or "composite" antenna, as appropriate. A full description of the design of the antenna must also be submitted.

(2) A relative field horizontal plane pattern of the proposed directional antenna. A single pattern encompassing both the horizontal and vertical polarization is required, rather than separate patterns for horizontal and vertical polarization. A value of 1.0 must be used to correspond to the direction of maximum radiation. The plot of the pattern must be oriented such that 0° corresponds to the direction of maximum radiation or alternatively, in the case of an asymmetrical antenna pattern, the plot must be oriented such that 0° corresponds to the actual azimuth with respect to true North. The horizontal plane pattern must be plotted to the largest scale possible on unglazed letter-size polar coordinate paper (main engraving approximately 7" x 10") using only scale divisions and subdivisions of 1, 2, 2.5, or 5 times 10 to the Nth power. Values of field strength less than 10% of the maximum field strength plotted on that pattern must be shown on an enlarged scale. In the case of a composite antenna composed of two or more individual antennas, the pattern required is that for the composite antenna, not the patterns for each of the individual antennas.

(3) A tabulation of the relative field pattern required in paragraph (c)(2) of this section. The tabulation must use the same zero degree reference as the plotted pattern, and must contain values for at least every 10°. In addition, tabulated values of all maximas and minimas, with their corresponding azimuths, must be submitted.

(4) Sufficient vertical patterns to indicate clearly the radiation characteristics of the antenna above and below the horizontal plane. Complete information and patterns must be provided for angles of ±10° from the horizontal plane and sufficient additional information must be included on that portion of the pattern lying between +10° and the zenith and −10° and the nadir, to conclusively demonstrate the absence of undesirable lobes in these areas. The vertical plane pattern must be plotted on rectangular coordinate paper with reference to the horizontal plane. In the case of a composite antenna composed of two or more individual antennas, the pattern required is that for the composite antenna, not the patterns for each of the individual antennas.

(5) A statement that the antenna will be mounted on the top of an antenna tower recommended by the antenna manufacturer, or will be side-mounted on a particular type of antenna tower in accordance with specific instructions provided by the antenna manufacturer.

(6) A statement that the directional antennas will not be mounted on the top of an antenna tower which includes a top-mounted platform larger than the nominal cross-sectional area of the tower in the horizontal plane.

(7) A statement that no other antennas of any type are mounted on the same tower level as a directional antenna, and that no antenna of any type is mounted within any horizontal or vertical distance specified by the antenna manufacturer as being necessary for proper directional operation.

(8) In the case of applications for license upon completion of antenna construction, a statement from a licensed surveyor that the antenna has been installed pursuant to the manufacturer's instructions and is in the proper orientation.

* * * * *

§ 73.317 FM transmission system requirements.

(a) FM broadcast stations employing transmitters authorized after January 1, 1960, must maintain the bandwidth occupied by their emissions in accordance with the specification detailed below. FM broadcast stations employing transmitters installed or type accepted before January 1, 1960, must achieve the highest degree of compliance with these specifications practicable with their existing equipment. In either case, should harmful interference to other authorized stations occur, the licensee shall correct the problem promptly or cease operation.

(b) Any emission appearing on a frequency removed from the carrier by between 120 kHz and 240 kHz inclusive must be attenuated at least 25 dB below the level of the unmodulated carrier. Compliance with this requirement will be deemed to show the occupied bandwidth to be 240 kHz or less.

(c) Any emission appearing on a frequency removed from the carrier by more than 240 kHz and up to and including 600 kHz must be attenuated at least 35 dB below the level of the unmodulated carrier.

(d) Any emission appearing on a frequency removed from the carrier by more than 600 kHz must be attenuated at least 43 + 10 Log_{10} (Power, in watts) dB below the level of the unmodulated carrier, or 80 dB, whichever is the lesser attenuation.

(e) Preemphasis shall not be greater than the impedance-frequency characteristics of a series inductance resistance network having a time constant of 75 microseconds. (See upper curve of Figure 2 of § 73.333.)

[51 FR 17028, May 8, 1986]

§ 73.318 FM blanketing interference.

Areas adjacent to the transmitting antenna that receive a signal with a strength of 115 dBu (562 mV/m) or greater will be assumed to be blanketed. In determining the blanketed area, the 115 dBu contour is determined by calculating the inverse distance field using the effective radiated power of the maximum radiated lobe of the antenna without considering its vertical radiation pattern or height. For directional antennas, the effective radiated power in the pertinent bearing shall be used.

(a) The distance to the 115 dBu contour is determined using the following equation:

D (in kilometers) $= 0.394\sqrt{P}$
D (in miles) $= 0.245\sqrt{P}$

Where P is the maximum effective radiated power (ERP), measured in kilowatts, of the maximum radiated lobe.

(b) After January 1, 1985, permittees or licensees who either (1) commence program tests, or (2) replace their antennas, or (3) request facilities modifications and are issued a new construction permit must satisfy all complaints of blanketing interference which are received by the station during a one year period. The period begins with the commencement of program tests or commencement of programming utilizing the new antenna. Resolution of complaints shall be at no cost to the complainant. These requirements specifically do not include interference complaints resulting from malfunctioning or mistuned receivers, improperly installed antenna systems, or the use of high gain antennas or antenna booster amplifiers. Mobile receivers and non-RF devices such as tape recorders or hi-fi amplifiers (phonographs) are also excluded.

(c) A permittee collocating with one or more existing stations and beginning program tests on or after January 1, 1985, must assume full financial responsibility for remedying new complaints of blanketing interference for a period of one year. Two or more permittees that concurrently collocate on or after January 1, 1985, shall assume shared responsibility for remedying blanketing complaints within the blanketing area unless an offending station can be readily determined and then that station shall assume full financial responsibility.

(d) Following the one year period of full financial obligation to satisfy blanketing complaints, licensees shall provide technical information or assistance to complainants on remedies for blanketing interference.

[28 FR 13623, Dec. 14, 1963, as amended at 52 FR 25866, July 9, 1987]

§ 73.319 FM multiplex subcarrier technical standards.

(a) The technical specifications in this Section apply to all transmissions of FM multiplex subcarriers except those used for stereophonic sound broadcasts under the provisions of § 73.322.

(b) *Modulation.* Any form of modulation may be used for subcarrier operation.

(c) *Subcarrier baseband.* (1) During monophonic program transmissions, multiplex subcarriers and their significant sidebands must be within the range of 20 kHz to 99 kHz.

(2) During stereophonic sound program transmissions (see § 73.322), multiplex subcarriers and their significant sidebands must be within the range of 53 kHz to 99 kHz.

(3) During periods when broadcast programs are not being transmitted, multiplex subcarriers and their significant sidebands must be within the range of 20 kHz to 99 kHz.

(d) *Subcarrier injection.*

(1) During monophonic program transmissions, modulation of the carrier by the arithmetic sum of all subcarriers may not exceed 30% referenced to 75 kHz modulation deviation. However, the modulation of the carrier by the airthmetic sum of all subcarriers above 75 kHz may not modulate the carrier by more than 10%.

(2) During stereophonic program transmissions, modulation of the carrier by the arithmetic sum of all subcarriers may not exceed 20% referenced to 75 kHz modulation deviation. However, the modulation of the carrier by the arithmetic sum of all subcarriers above 75 kHz may not modulate the carrier by more than 10%.

(3) During periods when no broadcast program service is transmitted, modulation of the carrier by the arithmetic sum of all subcarriers may not exceed 30% referenced to 75 kHz modulation deviation. However, the modulation of the carrier by the arithmetic sum of all subcarriers above 75 kHz may not modulate the carrier by more than 10%.

(4) Total modulation of the carrier wave during transmission of multiplex subcarriers used for subsidiary communications services must comply with the provisions § 73.1570(b).

(e) Subcarrier generators may be installed and used with a type accepted FM broadcast transmitter without specific authorization from the FCC provided the generator can be connected to the transmitter without requiring any mechanical or electrical modifications in the transmitter FM exciter circuits.

(f) Stations installing multiplex subcarrier transmitting equipment must ensure the proper suppression of spurious or harmonic radiations. See §§ 73.317, 73.1590 and 73.1690. If the subcarrier operation causes the station's transmissions not to comply with the technical provisions for FM broadcast stations or causes harmful interference to other communication services, the licensee or permittee must correct the problem promptly or cease operation. The licensee may be required to verify the corrective measures with supporting data. Such data must be retained at the station and be made available to the FCC upon request.

[48 FR 28455, June 22, 1983, as amended at 48 FR 37216, Aug. 17, 1983; 49 FR 15080, Apr. 17, 1984; 49 FR 38131, Sept. 27, 1984; 50 FR 1534, Jan. 11, 1985; 51 FR 17029, May 8, 1986]

§ 73.322 FM stereophonic sound transmission standards.

(a) An FM broadcast station shall not use 19 kHz ±20 Hz, except as the stereophonic pilot frequency in a transmission system meeting the following parameters:

(1) The modulating signal for the main channel consists of the sum of the right and left signals.

(2) The pilot subcarrier at 19 kHz ±2 Hz, must frequency modulate the main carrier between the limits of 8 and 10 percent.

(3) One stereophonic subcarrier must be the second harmonic of the pilot subcarrier (i.e. 38 kHz) and must cross the time axis with a positive slope simultaneously with each crossing of the time axis by the pilot subcarrier. Additional stereophomic subcarriers are not precluded.

(4) Double sideband, suppressed-carrier, amplitude modulation of the stereophonic subcarrier at 38 kHz must be used.

(5) The stereophonic subcarrier at 38 kHz must be suppressed to a level less than 1% modulation of the main carrier.

(6) The modulating signal for the required stereophonic subcarrier must

be equal to the difference of the left and right signals.

(7) The following modulation levels apply:

(i) When a signal exists in only one channel of a two channel (biphonic) sound transmission, modulation of the carrier by audio components within the baseband range of 50 Hz to 15 kHz shall not exceed 45% and modulation of the carrier by the sum of the amplitude modulated subcarrier in the baseband range of 23 kHz to 53 kHz shall not exceed 45%.

(ii) When a signal exists in only one channel of a stereophonic sound transmission having more than one stereophonic subcarrier in the baseband, the modulation of the carrier by audio components within the audio baseband range of 23 kHz to 99 kHz shall not exceed 53% with total modulation not to exceed 90%.

(b) Stations not transmitting stereo with the method described in (a), must limit the main carrier deviation caused by any modulating signals occupying the band 19 kHz ±20 Hz to 125 Hz.

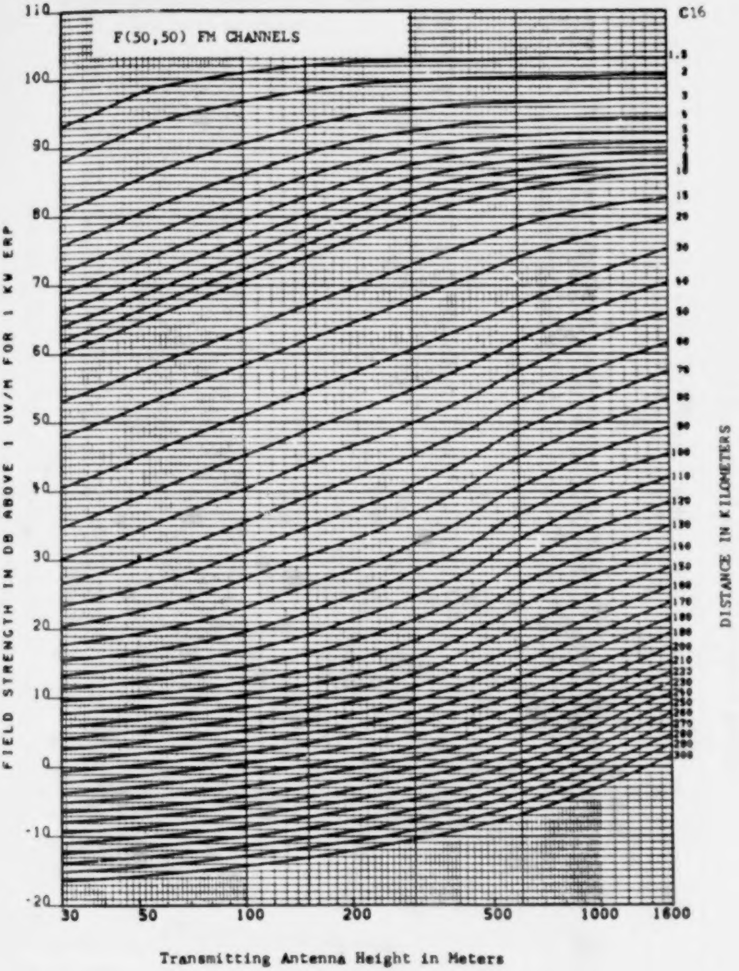
(c) All stations, regardless of the stereophonic transmission system used, must not exceed the maximum modulation limits specified in § 73.1570(b)(2). Stations not using the method described in (a), must limit the modulation of the carrier by audio components within the audio baseband range of 23 kHz to 99 kHz to not exceed 53%.

[51 FR 17029, May 8, 1986]

§ 73.333 Engineering charts.

This section consists of the following Figures 1, 1a, 2, and slider 4 and 5.

NOTE: The figures reproduced herein, due to their small scale, are not to be used in connection with material submitted to the F.C.C.

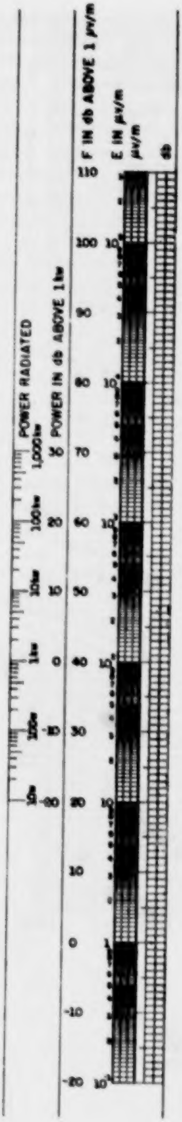


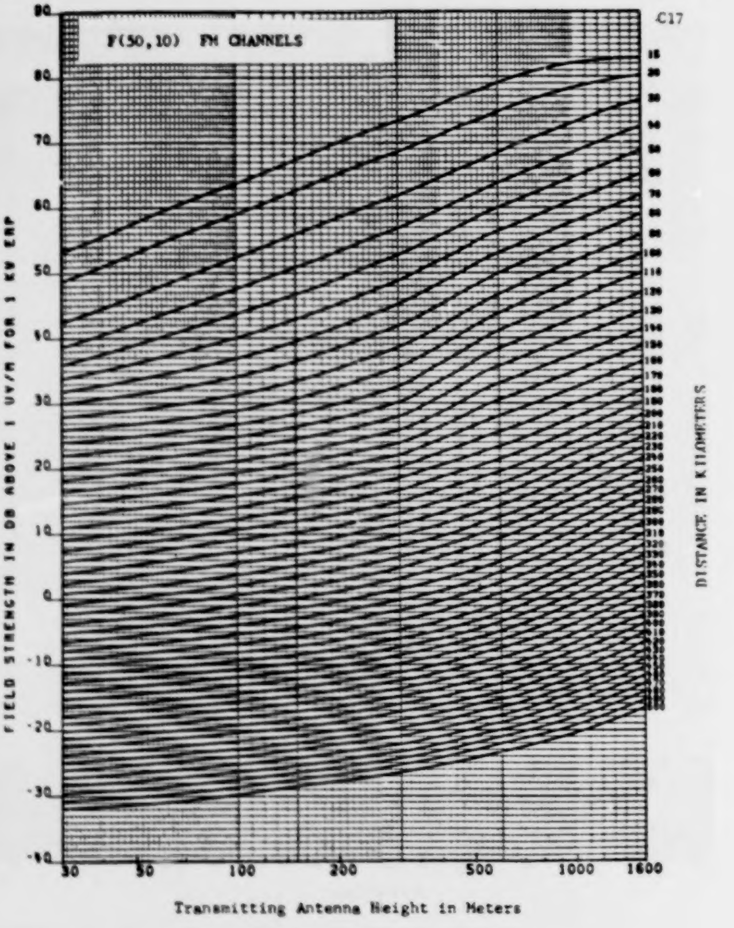
FCC §73.333 FIGURE 1

FM CHANNELS

ESTIMATED FIELD STRENGTH EXCEEDED AT 50 PERCENT OF THE POTENTIAL RECEIVER LOCATIONS FOR AT LEAST 50 PERCENT OF THE TIME AT A RECEIVING ANTENNA HEIGHT OF 9 METERS

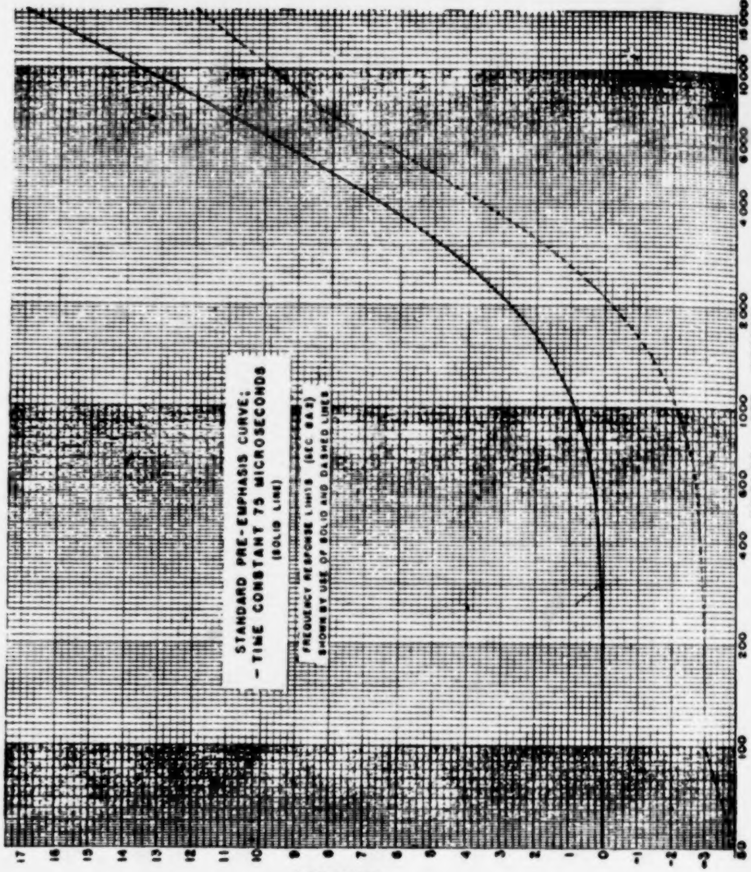
Sliding Scale for use with Figure 1, § 73.333

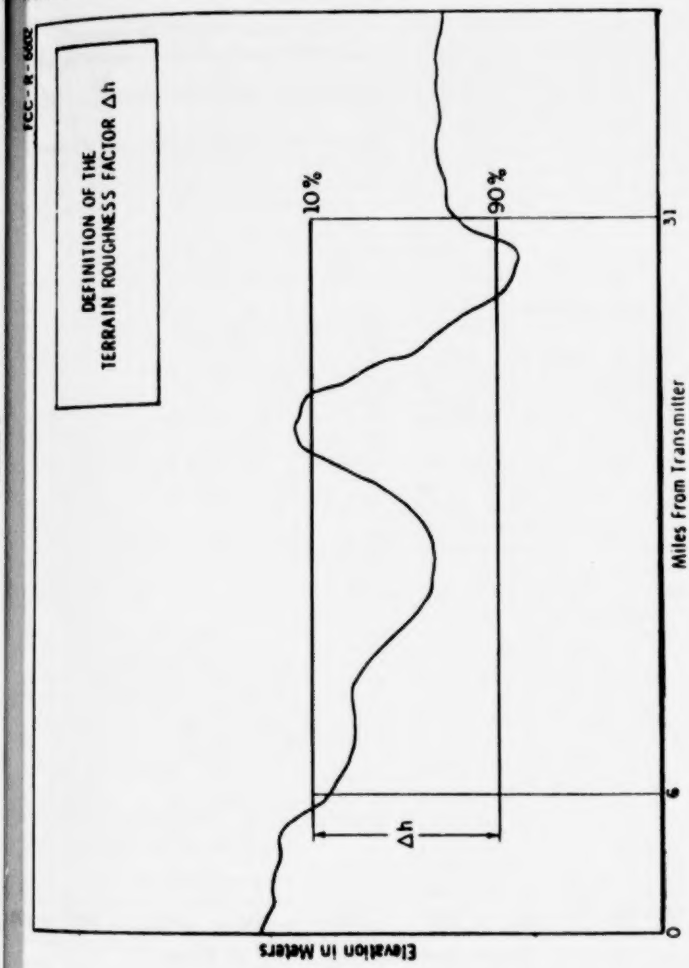

POWER RADIATED
POWER IN db ABOVE 1 kw
F IN db ABOVE 1 μv/m
E IN μv/m
μv/m
db
10kw
100kw
1kw
10kw
100kw
1,000kw
-20
-10
0
10
20
30
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20



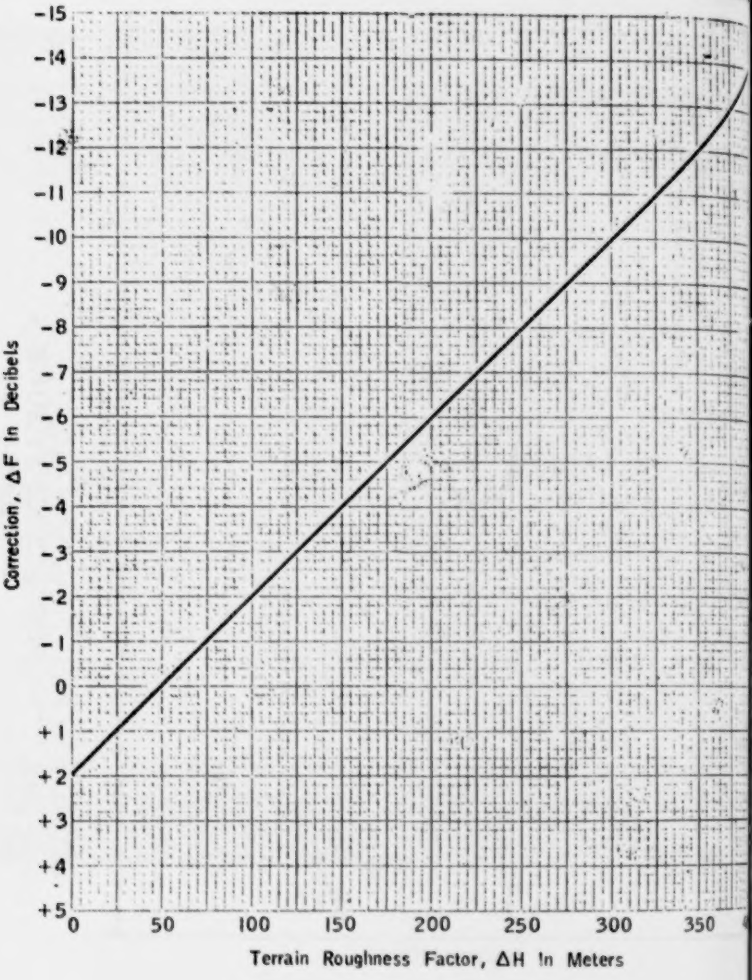
FCC §73.333 FIGURE 1a

FM CHANNELS
ESTIMATED FIELD STRENGTH EXCEEDED AT 50 PERCENT
OF THE POTENTIAL RECEIVER LOCATIONS FOR AT LEAST 10 PERCENT
OF THE TIME AT A RECEIVING ANTENNA HEIGHT OF 9 METERS


STANDARD PRE-EMPHASIS CURVE;
- TIME CONSTANT 75 MICROSECONDS
(SOLID LINE)
FREQUENCY RESPONSE LIMITS (SEC 3.4.2)
SHOWN BY USE OF SOLID AND DASHED LINES
DECIBELS
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
CYCLES PER SECOND
50
100
200
400
600
1000
2000
4000
6000
10000
15000



FCC § 73.333 FIGURE 4
(new)



TERRAIN ROUGHNESS CORRECTION

for use with estimated FM F(50,50) and F(50,10) field strength curves

FCC §73.333 FIGURE 5

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[28 FR 13623, Dec. 14, 1963, as amended at 35 FR 2591, Feb. 5, 1970; 40 FR 27679, July 1975; 45 FR 28141, Apr. 28, 1980; 48 FR 29508, June 27, 1983; 49 FR 19670, May 9, 1

EFFECTIVE DATE NOTE: At 42 FR 25736, May 19, 1977, the effective date of Figures 4 was stayed indefinitely.

Subpart C—Noncommercial Educational FM Broadcast Stations

§ 73.501 Channels available for assignment.

(a) The following frequencies, except as provided in paragraph (b) of this section, are available for noncommercial educational FM broadcasting:

Frequency (MHz)	Channel No.
87.9	[1] 200
88.1	201
88.3	202
88.5	203
88.7	204
88.9	205
89.1	[2] 206
89.3	207
89.5	208
89.7	209
89.9	210
90.1	211
90.3	212
90.5	213
90.7	214
90.9	215
91.1	216
91.3	217
91.5	218
91.7	219
91.9	220

[1] The frequency 87.9 MHz, Channel 200, is available only for use of existing Class D stations required to change frequency. It is available only on a noninterference basis with respect to TV Channel 6 stations and adjacent channel noncommercial educational FM stations. It is not available at all within 402 kilometers (250 miles) of Canada and 320 kilometers (199 miles) of Mexico. The specific standards governing its use are contained in § 73.512.

[2] The frequency 89.1 MHz, Channel 206, in the New York City metropolitan area, is reserved for the use of the United Nations with the equivalent of an antenna height of 500 feet above average terrain and effective radiated power of 20 kW and the Commission will make no assignments which would cause objectionable interference with such use.

(b) In Alaska, FM broadcast stations operating on Channels 200-220 (87.9-91.9 MHz) shall not cause harmful interference to and must accept interference from non-Government fixed operations authorized prior to January 1, 1982.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[43 FR 39715, Sept. 6, 1978, as amended at 47 FR 30068, July 12, 1982; 52 FR 43765, Nov. 16, 1987]

§ 73.502 State-wide plans.

In considering the assignment of a channel for a noncommercial educational FM broadcast station, the Commission will take into consideration the extent to which each application meets the requirements of any state-wide plan for noncommercial educational FM broadcast stations filed with the Commission, provided that such plans afford fair treatment to public and private educational institutions, urban and rural, at the primary, secondary, higher, and adult educational levels, and appear otherwise fair and equitable.

[28 FR 13651, Dec. 14, 1963]

§ 73.503 Licensing requirements and service.

The operation of, and the service furnished by noncommercial educational FM broadcast stations shall be governed by the following:

(a) A noncommercial educational FM broadcast station will be licensed only to a nonprofit educational organization and upon showing that the station will be used for the advancement of an educational program.

(1) In determining the eligibility of publicly supported educational organizations, the accreditation of their respective state departments of education shall be taken into consideration.

(2) In determining the eligibility of privately controlled educational organizations, the accreditation of state departments of education and/or recognized regional and national educational accrediting organizations shall be taken into consideration.

(b) Each station may transmit programs directed to specific schools in a system or systems for use in connection with the regular courses as well as routine and administrative material pertaining thereto and may transmit educational, cultural, and entertainment programs to the public.

(c) A noncommercial educational FM broadcast station may broadcast programs produced by, or at the expense of, or furnished by persons other than the licensee, if no other consideration than the furnishing of the program and the costs incidental to its production and broadcast are received by the licensee. The payment of line charges by another station network, or someone other than the licensee of a noncommercial educational FM broadcast station, or general contributions to the operating costs of a station, shall not be considered as being prohibited by this paragraph.

(d) Each station shall furnish a nonprofit and noncommercial broadcast service. Noncommercial educational FM broadcast stations are subject to the provisions of § 73.1212 to the extent they are applicable to the broadcast of programs produced by, or at the expense of, or furnished by others. No *promotional* announcement *on behalf of for profit entities* shall be broadcast at any time in exchange for the receipt, in whole or in part, of consideration to the licensee, its principals, or employees. However, acknowledgements of contributions can be made. *The scheduling of any announcements and acknowledgements may not interrupt regular programming.*

NOTE: Commission interpretation of this rule, including the acceptable form of acknowledgements, may be found in the Second Report and Order in Docket No. 21136 (Commission Policy Concerning the Noncommercial Nature of Educational Broadcast Stations), 86 F.C.C. 2d 141 (1981); the Memorandum Opinion and Order in Docket No. 21136, 90 FCC 2d 895 (1982), and the Memorandum Opinion and Order in Docket 21136, 49 FR 13534, April 5, 1984.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[28 FR 13651, Dec. 14, 1963, as amended at 35 FR 7558, May 15, 1970; 47 FR 36178, Aug. 19, 1982; 49 FR 29069, July 18, 1984]

§ 73.504 Channel assignments in the Mexican border area.

(a) NCE-FM stations within 199 miles (320 km) of the United States-Mexican border shall comply with the separation requirements and other provisions of the "Agreement between the United States of America and the United Mexican States Concerning Frequency Modulation Broadcasting in the 88 to 108 MHz Band" as amended.

(b) Applicants for noncommercial educational FM stations within 199 miles (320 km) of the United States-Mexican border shall propose at least Class A minimum facilities (see § 73.211(a)). However, existing Class D noncommercial educational stations may apply to change frequency within the educational portion of the FM band in accordance with the requir ments set forth in § 73.512.

(c) Section 73.208 of this chapte shall be complied with as to the dete mination of reference points and di tance computations used in applica tions for new or changed faciliti However, if it is necessary to consid a Mexican channel assignment or a thorization, the computation of di tance will be determined as follows a transmitter site has been esta lished, on the basis of the coordinat of the site; if a transmitter site has n been established, on the basis of th reference coordinates of the commun ty, town, or city.

[52 FR 43765, Nov. 16, 1987]

§ 73.505 Zones.

For the purpose of assignment noncommercial educational FM s tions, the United States is divided in three zones, Zone I, Zone I-A, a Zone II, having the boundaries spe fied in § 73.205.

[42 FR 36828, July 18, 1977]

§ 73.506 Classes of noncommercial edu tional FM stations and channels.

(a) Noncommercial educational s tions operating on the channels spe fied in § 73.501 are divided into the fo lowing classes:

(1) A Class D educational station one operating with no more than watts transmitter power output.

(2) A Class D educational (second ary) station is one operating with more than 10 watts transmitter pow output in accordance with the ter of § 73.512 or which has elected follow these requirements before th become applicable under the terms § 73.512.

(3) Noncommercial educational F (NCE-FM) stations with more than watts transmitter power output a classified as Class A, B1, B, C3, C2, C or C depending on the station's effe tive radiated power and antenn height above average terrain, and the zone in which the station's tran mitter is located, on the same basis set forth in §§ 73.210 and 73.211 fo commercial stations.

(b) Any noncommercial educational station except Class D may be assigned to any of the channels listed in § 73.501. Class D noncommercial educational FM stations applied for or authorized prior to June 1, 1980, may continue to operate on their authorized channels subject to the provisions of § 73.512.

[43 FR 39715, Sept. 6, 1978, as amended at 49 FR 10264, Mar. 20, 1984; 52 FR 47569, Dec. 15, 1987; 54 FR 16367, Apr. 24, 1989; 54 FR 19374, May 5, 1989]

§ 73.507 Minimum distance separations between stations.

(a) *Minimum distance separations.* No application for a new station, or change in channel or transmitter site or increase in facilities of an existing station, will be granted unless the proposed facilities will be located so as to meet the adjacent channel distance separations specified in § 73.207(a) for the class of station involved with respect to assignment on Channels 221, 222, and 223 listed in § 73.201 (except where in the case of an existing station the proposed facilities fall within the provisions of § 73.207(b)), or where a Class D station is changing frequency to comply with the requirements of § 73.512.

(b) Stations authorized as of September 10, 1962, which do not meet the requirements of paragraph (a) of this section and § 73.511, may continue to operate as authorized; but any application to change facilities will be subject to the provisions of this section.

(c)(1) Stations separated in frequency by 10.6 or 10.8 MHz (53 or 54 channels) from allotments or assignments on non-reserved channels will not be authorized unless they conform to the separations in Table A given in § 73.207.

(2) Under the United States-Mexican FM Broadcasting Agreement, for stations and assignments differing in frequency by 10.6 to 10.8 MHz (53 or 54 channels), U.S. noncommercial educational FM allotments and assignments must meet the separations given in Table C of § 73.207 to Mexican allotments or assignments in the border area.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[42 FR 36828, July 18, 1977, as amended at 43 FR 39716, Sept. 6, 1978; 44 FR 65764, Nov. 15, 1979; 49 FR 10264, Mar. 20, 1984; 49 FR 19670, May 9, 1984]

§ 73.508 Standards of good engineering practice.

(a) All noncommercial educational stations operating with more than 10 watts transmitter output power shall be subject to all of the provisions of the FM Technical Standards contained in subpart B of this part. Class D educational stations shall be subject to the definitions contained in § 73.310 of subpart B of this part, and also to those other provisions of the FM Technical Standards which are specifically made applicable to them by the provisions of this subpart.

(b) The transmitter and associated transmitting equipment of each noncommercial educational FM station licensed for transmitter output power above 10 watts must be designed, constructed and operated in accordance with § 73.317.

(c) The transmitter and associated transmitting equipment of each noncommercial educational FM station licensed for transmitter power output of 10 watts or less, although not required to meet all requirements of § 73.317, must be constructed with the safety provisions of the current national electrical code as approved by the American Standards Association. These stations must be operated, tuned, and adjusted so that emissions are not radiated outside the authorized band causing or which are capable of causing interference to the communications of other stations. The audio distortion, audio frequency range, carrier hum, noise level, and other essential phases of the operation which control the external effects, must be at all times capable of providing satisfactory broadcast service. Studio equipment properly covered by an underwriter's certificate will be considered as satisfying safety requirements.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[28 FR 13651, Dec. 14, 1963. Redesignated at 42 FR 36828, July 18, 1977, and amended at

43 FR 53738, Nov. 17, 1978; 45 FR 28141, Apr. 28, 1980]

§ 73.509 Prohibited overlap.

(a) An application for a new or modified NCE-FM station other than a Class D (secondary) station will not be accepted if the proposed operation would involve overlap of signal strength contours with any other station licensed by the Commission and operating in the reserved band (Channels 200-220, inclusive) as set forth below:

Frequency separation	Contour of proposed station	Contour of other station
Co-channel	0.1mV/m (40 dBu)	1 mV/m (60 dBu).
	1 mV/m (60 dBu)	0.1 mV/m (40 dBu).
200 kHz	0.5 mV/m (54 dBu)	1 mV/m (60 dBu).
	1 mV/m (60 dBu)	0.5 mV/m (54 dBu).
400 kHz	10 mV/m (80 dBu)	1 mV/m (60 dBu).
	1 mV/m (60 dBu)	10 mV/m (80 dBu).
600 kHz	100 mV/m (100 dBu)	1 mV/m (60 dBu).
	1 mV/m (60 dBu)	100 mV/m (100 dBu).

(b) An application by a Class D (secondary) station, other than an application to change class, will not be accepted if the proposed operation would involve overlap of signal strength contours with any other station as set forth below:

Frequency separation	Contour of proposed station	Contour of any other station
Co-channel	0.1 mV/m (40 dBu)	1 mV/m (60 dBu).
200 kHz	0.5 mV/m (54 dBu)	1 mV/m (60 dBu).
400 kHz	10 mV/m (80 dBu)	1 mV/m (60 dBu).
600 kHz	100 mV/m (100 dBu)	1 mV/m (60 dBu).

(c) The following standards must be used to compute the distances to the pertinent contours:

(1) The distance of the 60 dBu (1 mV/m) contours are to be computed using Figure 1 of § 73.333 [F(50,50) curves] of this part.

(2) The distance to the other contours are to be computed using Figure 1a of § 73.333 [F(50,10) curves]. In the event that the distance to the contour is below 16 kilometers (approximately 10 miles), and therefore not covered by Figure 1a, curves in Figure 1 must be used.

(3) The effective radiated power (ERP) that is the maximum ERP for any elevation plane on any bearing will be used.

(d) An application for a change (other than a change in channel) in the facilities of a NCE-FM broadcast station will be accepted even though overlap of signal strength contours, as specified in paragraphs (a) and (b) of this section, would occur with another station in an area where such overlap does not already exists, if:

(1) The total area of overlap with that station would not be increased;

(2) The area of overlap with any other station would not increase;

(3) The area of overlap does not move significantly closer to the station receiving the overlap; and,

(4) No area of overlap would be created with any station with which the overlap does not now exist.

(e) The provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water.

[50 FR 27962, July 9, 1985, as amended at FR 43765, Nov. 16, 1987]

§ 73.510 Antenna systems.

(a) All noncommercial educational stations operating with more than 1 watts transmitter output power shall be subject to the provisions of § 73.3 concerning antenna systems contained in subpart B of this part.

(b) *Directional antenna.* No application for a construction permit of a new station, or change in channel, or change in an existing facility on the same channel will be accepted for filing if a directional antenna with a maximum-to-minimum ratio of more than 15 dB is proposed.

[42 FR 36829, July 18, 1977]

§ 73.511 Power and antenna height requirements.

(a) No new noncommercial educational station will be authorized with less power than minimum power requirements for commercial Class A facilities. (See § 73.211.)

(b) No new noncommercial educational FM station will be authorized with facilities greater than Class B in Zones I and I-A or Class C in Zone II as defined in § 73.211.

(c) Stations licensed before December 31, 1984, and operating above 50 kW in Zones I and I-A, and above 100 kW and in Zone II may continue to operate as authorized.

[50 FR 27963, July 9, 1985, as amended at 50 FR 31379, Aug. 2, 1985; 54 FR 3602, Jan. 25, 1989]

§ 73.512 Special procedures applicable to Class D noncommercial educational stations.

(a) All Class D stations seeking renewal of license for any term expiring June 1, 1980, or thereafter shall comply with the requirements set forth below and shall simultaneously file an application on FCC Form 340, containing full information regarding such compliance with the provisions set forth below.

(1) To the extent possible, each applicant shall select a commercial FM channel on which it proposes to operate in lieu of the station's present channel. The station may select any commercial channel provided no objectionable interference, as set forth in § 73.509(b), would be caused. The application shall include the same engineering information as is required to change the frequency of an existing station and any other information necessary to establish the fact that objectionable interference would not result. If no commerical channel is available where the station could operate without causing such interference, the application shall set forth the basis upon which this conclusion was reached.

(2) If a commercial channel is unavailable, to the extent possible each applicant should propose operation on Channel 200 (87.9 MHz) unless the station would be within 402 kilometers (250 miles) of the Canadian border or 320 kilometers (199 miles) of the Mexican border or would cause interference to an FM station operating on Channels 201, 202, or 203 or to TV Channel 6, as provided in § 73.509.

(3) If a channel is not available under either paragraph (a) (1) or (2) of this section, the renewal applicant shall study all 20 noncommercial educational FM channels and shall propose operation on the channel which would cause the least preclusion to the establishment of new stations or increases in power by existing stations. Full information regarding the basis for the selection should be provided.

(b) At any time before the requirements of paragraph (a) become effective, any existing Class D station may file a construction permit application on FCC Form 340 to change channel in the manner described above which shall be subject to the same requirements. In either case, any license granted shall specify that the station's license is for a Class D (secondary) station.

(c) Except in Alaska, no new Class D applications nor major change applications by existing Class D stations are acceptable for filing except by existing Class D stations seeking to change frequency. Upon the grant of such application, the station shall become a Class D (secondary) station.

(d) Class D noncommercial educational (secondary) stations (see § 73.506(a)(2)) will be permitted to continue to operate only so long as no interference (as defined in § 73.509) is caused to any TV or commercial FM broadcast stations. In the event that the Class D (secondary) station would cause interference to a TV or commercial FM broadcast station after that Class D (secondary) station is authorized, the Class D (secondary) station must cease operation when program tests for the TV or commercial FM broadcast station commence. The Class D (secondary) station may apply for a construction permit (see § 73.3533) to change to another frequency or antenna site where it would not cause interference (as defined in § 73.509). If the Class D (secondary) station must cease operation before the construction permit is granted, an application for temporary authorization (pursuant to § 73.3542) to operate with the proposed facilities may be submitted; where appropriate, such temporary authorization can be granted.

[43 FR 39716, Sept. 6, 1978, as amended at 44 FR 48226, Aug. 17, 1979; 47 FR 28388, June 30, 1982; 50 FR 8326, Mar. 1, 1985]

§ 73.513 Noncommercial educational FM stations operating on unreserved channels.

Noncommercial educational FM stations other than Class D (secondary) which operate on Channels 221 through 300 but which comply with § 73.503 as to licensing requirements and the nature of the service rendered, must comply with the provisions of the following sections of subpart B: §§ 73.201 through 73.213 (Classification of FM Broadcast Stations and Allocations of Frequencies) and such other sections of subpart B as are made specially applicable by the provisions of this subpart C. Stations in Alaska authorized before August 11, 1982, using Channels 261-300 need not meet the minimum effective radiated power requirement specified in § 73.211(a). In all other respects, stations operating on Channels 221 through 300 are to be governed by the provisions of this subpart and not subpart B.

[47 FR 30068, July 12, 1982]

§ 73.525 TV Channel 6 protection.

The provisions of this section apply to all applications for construction permits for new or modified facilities for a NCE-FM station on Channels 200-220 unless the application is accompanied by a written agreement between the NCE-FM applicant and each affected TV Channel 6 broadcast station concurring with the proposed NCE-FM facilities.

(a) *Affected TV Channel 6 Station.*

(1) An affected TV Channel 6 station is a TV broadcast station which is authorized to operate on Channel 6 that is located within the following distances of a NCE-FM station operating on Channels 201-220:

TABLE A

NCE-FM channel	Distance (kilometers)	NCE-FM channel	Distance (kilometers)
201	265	211	196
202	257	212	195
203	246	213	193
204	235	214	187
205	225	215	180
206	211	216	177
207	196	217	174
208	196	218	166

TABLE A—Continued

NCE-FM channel	Distance (kilometers)	NCE-FM channel	Distance (kilometers)
209	196	219	[illegible]
210	196	220	[illegible]

(2) Where a NCE-FM application has been accepted for filing or granted, the subsequent acceptance of an application filed by a relevant TV Channel 6 station will not require revision of the pending NCE-FM application or the FM station's authorized facilities, unless the provisions of paragraph (e)(3) of this section for TV translator or satellite stations apply.

(b) *Existing NCE-FM Stations.* (1) A NCE-FM station license authorized to operate on channels 201-220 as of December 31, 1984, or a permittee, granted a construction permit for a NCE-FM station as of December 31, 1984 are not subject to this section unless they propose either:

(i) To make changes in operating facilities or location which will increase predicted interference as calculated under paragraph (e) of this section to TV Channel 6 reception in any direction; or,

(ii) To increase its ratio of vertically polarized to horizontally polarized transmissions.

(2) Applicants must comply with the provision of paragraphs (c) or (d) of this section unless the application for modification demonstrates that, for each person predicted to receive new interference as a result of the change existing predicted interference to two person will be eliminated. Persons predicted to receive new interference are those located outside the area predicted to receive interference from the station's currently authorized facilities ("existing predicted interference area") but within the area predicted to receive interference from the proposed facilities ("proposed predicted interference area"). Persons for whom predicted interference will be eliminated are those located within the existing predicted interference area and outside the proposed predicted interference area.

(i) In making this calculation, the provisions contained at paragraph (e) will be used except as modified by paragraph (b)(3) of this section.

(ii) The following adjustment to the population calculation may be made: up to 1,000 persons may be subtracted from the population predicted to receive new interference if, for each person substracted, the applicant effectively installs two filters within 90 days after commencing program tests with the proposed facilities and, no later than 45 days thereafter, provides the affected TV Channel 6 station (as defined in paragraph (a) of this section) with a certification containing sufficient information to permit verification of such installation. The required number of filters will be installed on television receivers located within the predicted interference area; provided that half of the installations are within the area predicted to receive new interference.

(3) Where an NCE-FM applicant wishes to operate with facilities in excess of that permitted under the provisions of paragraphs (c) or (d) of this section, by proposing to use vertically polarized transmissions only, or to increase its ratio of vertically to horizontally polarized transmissions, the affected TV Channel 6 station must be given an option to pay for the required antenna and, if it takes that option, the NCE-FM vertically polarized component of power will be one half (−3 dB) that which would be allowed by the provisions of paragraph (e)(4) of this section.

(4) Applications for modification will include a certification that the applicant has given early written notice of the proposed modification to all affected TV Channel 6 stations (as defined in paragraph (a) of this section).

(5) Where the NCE-FM station demonstrates in its application that it must make an involuntary modification (*e.g.*, due to loss of its transmitter site) that would not otherwise be permitted under this section, its application will be considered on a case-by-case basis. In such cases, the provisions of paragaph (b)(3) of this section do not apply.

(c) *New NCE-FM Stations.* Except as provided for by paragraph (d) of this section, applicants for NCE-FM stations proposing to operate on Channels 201-220 must submit a showing indicating that the predicted interference area resulting from the proposed facility contains no more than 3,000 persons.

(1) In making these calculations, the provisions in paragraph (e) of this section will be used.

(2) The following adjustment to population may be made: up to 1,000 persons may be subtracted from the population within the predicted interference area if, for each person subtracted, the applicant effectively installs one filter within 90 days after commencing program tests and, no later than 45 days thereafter, provides the affected TV Channel 6 station with a certification containing sufficient information to permit verification of such installation. The required number of filters will be installed on television receivers located within the predicted interference area.

(d) *Collocated Stations.* As an alternative to the provisions contained in paragraphs (b) and (c) of this section, an application for a NCE-FM station operating on Channels 201-220 and located at 0.4 kilometer (approximately 0.25 mile) or less from a TV Channel 6 station will be accepted under the following requirements:

(1) The effective radiated power cannot exceed the following values:

TABLE B

NCE-FM channel	Power (kilowatt)	NCE-FM channel	Power (kilowatt)
201	1.1	211	26.3
202	1.9	212	31.6
203	3.1	213	38.0
204	5.0	214	46.8
205	8.3	215	56.2
206	10.0	216	67.6
207	12.0	217	83.2
208	14.8	218	100.0
209	17.8	219	100.0
210	21.4	220	100.0

(2) The NCE-FM application will include a certification that the applicant has coordinated its antenna with the affected TV station by employing either: The same number of antenna bays with radiation centers separated by no more than 30 meters (approximately 100 feet) verticially; or, the FM

vertical pattern not exceeding the TV vertical pattern by more than 2dB.

(e) *Calculation of Predicted Interference Area and Population.* Predictions of interference required under this section and calculations to determine the number of persons within a predicted interference area for NCE-FM operation on Channels 201-220 are made as follows:

(1) The predicted interference area will be calculated as follows:

(i) The distances to the TV Channel 6 field strength contours will be predicted according to the procedures specified in § 73.684, "Prediction of coverage," using the F(50,50) curves in Figure 9, § 73.699.

(ii) For each TV Channel 6 field strength contour, there will be an associated F(50,10) FM interference contour, the value of which (in units of dBu) is defined as the sum of the TV Channel 6 field strength (in dBu) and the appropriate undesired-to-desired (U/D) signal ratio (in dB) obtained from Figures 1 and 2, § 73.599, corresponding to the channel of the NCE-FM applicant and the appropriate F(50,50) field strength contour of the TV Channel 6 station.

(iii) An adjustment of 6 dB for television receiving antenna directivity will be added to each NCE-FM interference contour at all points outside the Grade A field strength contour (§ 73.683) of the TV Channel 6 station and within an arc defined by the range of angles, of which the FM transmitter site is the vertex, from 110° relative to the azimuth from the FM transmitter site to the TV Channel 6 transmitter site, counterclockwise to 250° relative to that azimuth. At all points at and within the Grade A field strength contour of the TV Channel 6 station, the 6 dB adjustment is applicable over the range of angles from 70° clockwise to 110° and from 250° clockwise to 290°.

(iv) The distances to the applicable NCE-FM interference contours will be predicted according to the procedures specified in § 73.313, "Prediction of Coverage," using the proposed antenna height and horizontally polarized, or the horizontal equivalent of the vertically polarized, effective radiated power in the pertinent direction and the F(50,10) field strength cur (Figure 1a, § 73.333).

(v) The predicted interference ar will be defined as the area within t TV Channel 6 station's 47 dBu fie strength contour that is bounded the locus of intersections of a series TV Channel 6 field strength contou and the applicable NCE-FM interfe ence contours.

(vi) In cases where the terrain in o or more directions departs widely fro the surrounding terrain average (f example, an intervening mountain), supplemental showing may be ma Such supplemental showings must d scribe the procedure used and shou include sample calculations. The app cation must also include maps indic ing the predicted interference area f both the regular method and the su plemental method.

(2) The number of persons contai within the predicted interference ar will be based on data contained in th most recently published U.S. Cens of Population and will be determin by plotting the predicted interferen area on a County Subdivision Map the state published for the Cens and totalling the number of persons each County Subdivision (such Minor Civil Division (MCD), Cens County Division (CCD), or equivale areas) contained within the predict interference area. Where only a p tion of County Subdivision is co tained within the interference area:

(i) The population of all incorpor ed places or Census designated plac will be subtracted from the Coun Subdivision population;

(ii) Uniform distribution of the r maining population over the remai ing area of the County Subdivisio will be assumed in determining th number of persons within the predic ed interference area in proportion t the share of the remaining area of th County Subdivision that lies withi the predicted interference area; and

(iii) The population of the incorp rated places or Census designate places contained within the predicte interference area will then be added t the total, again assuming uniform di tribution of the population within th area of each place and adding a sha of the population proportional to th share of the area if only a portion of such a place is within the predicted interference area.

(iv) At the option of either the NCE-FM applicant or an affected TV Channel 6 station which provides the appropriate analysis, more detailed population data may be used.

(3) Adjustments to the population calculated pursuant to paragraph (e)(2) of this section may be made as follows:

(i) If any part of the predicted interference area is within the Grade A field strength contour (§ 73.683) of a TV translator station carrying the affected TV Channel 6 station, the number of persons within that overlap area will be subtracted, provided the NCE-FM construction permit and license will contain the following conditions:

(A) When the TV translator station ceases to carry the affected TV Channel 6 station's service and the cessation is not the choice of the affected TV Channel 6 station, the NCE-FM station will modify its facilities, within a reasonable transition period, to meet the requirements of this section which would have applied if no adjustment to population for translator service had been made in its application.

(B) The transition period may not exceed 1 year from the date the NCE-FM station is notified by the TV Channel 6 station that the translator station will cease to carry the affected TV Channel 6 station's service or 6 months after the translator station ceases to carry the affected TV Channel 6 station's service, whichever is earlier.

(ii) If any part of the interference area is within the Grade B field strength contour (§ 73.683) of a satellite station of the affected TV Channel 6 station, the number of persons within the overlap area will be subtracted, provided the NCE-FM permit and license will contain the following conditions:

(A) If the satellite station ceases to carry the affected TV Channel 6 station's service and the cessation is not the choice of the affected TV Channel 6 station, the NCE-FM station will modify its facilities, within a reasonable transition period, to meet the requirements of this rule which would have applied if no adjustment to population for satellite station service had been made in its application.

(B) The transition period may not exceed 1 year from the date the NCE-FM station is notified by the TV Channel 6 station that the satellite station will cease to carry the affected TV Channel 6 stations's service or 6 months after the satellite station ceases to carry the affected TV Channel 6 station's service, whichever is earlier.

(iii) If any part of the predicted interference area is located outside the affected TV Channel 6 station's Area of Dominant Influence (ADI), outside the Grade A field strength contour (§ 73.683), and within the predicted city grade field strength contour (73.685(a)) of a TV broadcast station whose only network affiliation is the same as the only network affiliation of the affected TV Channel 6 station, the number of persons within that part will be subtracted. (For purposes of this provision, a network is defined as ABC, CBS, NBC, or their successors.) In addition, the ADI of an affected TV Channel 6 station and the program network affiliations of all relevant TV broadcast stations will be assumed to be as they were on the filing date of the NCE-FM application or June 1, 1985, whichever is later.

(iv) In calculating the population within the predicted interference area, an exception will be permitted upon a showing (*e.g.*, as survey of actual television reception) that the number of persons within the predicted interference area should be reduced to account for persons actually experiencing co-channel or adjacent channel interference to reception of the affected TV Channel 6 station. The area within which such a showing may be made will be limited to the area calculated as follows:

(A) The distances to the field strength contours of the affected TV Channel 6 station will be predicted according to the procedures specified in § 73.684, "Prediction of coverage," using the F(50,50) curves in Figure 9, §73.699.

(B) For each field strength contour of the affected TV Channel 6 station, there will be an associated co-channel or adjacent channel TV broadcast station interference contour, the value of which (in units of dBu) is defined as the sum of the affected TV Channel 6 station's field strength (in dBu) and the appropriate undesired-to-desired signal ratio (in dB) as follows:

Co-channel, normal offset, −22 dB
Co-channel, no offset, −39 dB
Adjacent channel, +12 dB

(C) The distances to the associated co-channel or adjacent channel TV broadcast station interference contour will be predicted according to the procedures specified in § 73.684, "Prediction of coverage," using the F(50,10) curves in Figure 9a, § 73.699.

(D) The area within which the showing of actual interference may be made will be the area bounded by the locus of intersections of a series of the affected TV Channel 6 station's field strength contours and the associated interference contours of the co-channel or adjacent channel TV broadcast station.

(4) The maximum permissible effective radiated power (ERP) and antenna height may be adjusted for vertical polarity as follows:

(i) If the applicant chooses to use vertically polarized transmissions only, the maximum permissible vertically polarized ERP will be the maximum horizontally polarized ERP permissible at the same proposed antenna height, calculated without the adjustment for television receiving antenna directivity specified in paragraph (e)(1)(iii) of this section, multiplied by either: 40 if the predicted interference area lies entirely outside the limits of a city of 50,000 persons or more; or 10 if it does not.

(ii) If the applicant chooses to use mixed polarity, the permissible ERP is as follows:

[H+(V/A)] is no greater than P

Where:

H is the horizontally polarized ERP in kilowatts for mixed polarity;

V is the vertically polarized ERP in kilowatts for mixed polarity;

A is 40 if the predicted interference area lies entirely outside the limits of a city of 50,000 persons or more, or 10 if it does not; and

P is the maximum permitted horizonta polarized-only power in kilowatts.

(f) *Channel 200 Applications.* No a plication for use of NCE-FM Chann 200 will be accepted if the reques facility would cause objectionable i terference to TV Channel 6 ope ations. Such objectionable interfe ence will be considered to exist whe ever the 15 dBu contour based on th F(50,10) curves in § 73.333 Figure would overlap the 40 dBu conto based on the F(50,50) curves § 73.699, Figure 9.

[50 FR 27963, July 9, 1985; 50 FR 301 July 24, 1985; 50 FR 31379, Aug. 2, 198 amended at 51 FR 26250, July 22, 198 FR 25867, July 9, 1987]

§ 73.558 Indicating instruments.

The requirements for indicating i struments described in § 73.258 are a plicable to all educational FM broa cast stations licensed with a transmi ter power greater than 0.01 kw.

[51 FR 17029, May 8, 1986]

§ 73.561 Operating schedule; time shari

(a) All noncommercial educatio FM stations will be licensed for unli ited time operation except those s tions operating under a time shari arrangement. All noncommercial ed cational FM stations are required operate at least 36 hours per wee consisting of at least 5 hours of ope ation per day on at least 6 days of th week; however, stations licensed educational institutions are not quired to operate on Saturday Sunday or to observe the minimum o erating requirements during tho days designated on the official scho calendar as vacation or recess period

(b) All stations, including tho meeting the requirements of par graph (a) of this section, but which d not operate 12 hours per day each d of the year, will be required to sha use of the frequency upon the grant an appropriate application proposi such share time arrangement. Su applications shall set forth the inte to share time and shall be filed in th same manner as are applications new stations. They may be filed at an time, but in cases where the parti are unable to agree on time sharing action on the application will be taken only in connection with the renewal of application for the existing station. In order to be considered for this purpose, such an application to share time must be filed no later than the deadline for filing applications in conflict with the renewal application of the existing licensee.

(1) The licensee and the prospective licensee(s) shall endeavor to reach an agreement for a definite schedule of periods of time to be used by each. Such agreement shall be in writing and shall set forth which licensee is to operate on each of the hours of the day throughout the year. Such agreement shall not include simultaneous operation of the stations. Each licensee shall file the same in triplicate with each application to the Commission for initial construction permit or renewal of license. Such written agreements shall become part of the terms of each station's license.

(2) The Commission desires to facilitate the reaching of agreements on time sharing. However, if the licensees of stations authorized to share time are unable to agree on a division of time, the Commission shall be so notified by statement to that effect filed with the application proposing time sharing. Thereafter the Commission will designate the application for hearing on any qualification issues arising regarding the renewal or new applicants. If no such issues pertain, the Commission will set the matter for expedited hearing limited solely to the issue of the sharing of time. In the event the stations have been operating under a time sharing agreement but cannot agree on its continuation, a hearing will be held, and pending such hearing, the operating schedule previously adhered to shall remain in full force and effect.

(c) A departure from the regular schedule set forth in a time-sharing agreement will be permitted only in cases where an agreement to that effect is reduced to writing, is signed by the licensees of the stations affected thereby and filed in triplicate by each licensee with the Commission prior to the time of the proposed change. If time is of the essence, the actual departure in operating schedule may precede the actual filing of written agreement, provided appropriate notice is sent to the Commission in Washington, DC.

(d) In the event that causes beyond the control of a permittee or licensee make it impossible to adhere to the operating schedule in paragraphs (a) and (b) of this section or to continue operating, the station may limit or discontinue operation for a period of not more than 30 days without further authority from the Commission, *Provided*, That notification is sent to the Commission in Washington, DC no later than the 10th day of limited or discontinued operation. During such period, the permittee or licensee shall continue to adhere to the requirements of the station license pertaining to the lighting of antenna structures. In the event normal operation is restored prior to the expiration of the 30-day period, the permittee or licensee will so notify the Commission in Washington, DC, of this date. If the causes beyond the control of the permittee or licensee make it impossible to comply within the allowed period, informal written request shall be made to the Commission in Washington, DC, no later than the 30th day for such additional time as may be deemed necessary.

NOTE 1: For allocations purposes, both (all) stations sharing time will be treated as unlimited time stations.

NOTE 2: See §§ 73.1705, 73.1715, and 73.1740.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[43 FR 39717, Sept. 6, 1978, as amended at 43 FR 45845, Oct. 4, 1978; 44 FR 3416, Jan. 19, 1979; 44 FR 65764, Nov. 15, 1979; 47 FR 54448, Dec. 3, 1982; 50 FR 13974, Apr. 9, 1985]

§ 73.567 Determining operating power.

The procedures for determining operating power described in § 73.267 are applicable to noncommercial education FM stations.

[44 FR 58732, Oct. 11, 1979]

§ 73.593 Subsidiary communications services.

The licensee of a noncommercial educational FM station is not required to use its subcarrier capacity, but if it chooses to do so, it is governed by §§ 73.293 through 73.295 of the Commission's Rules regarding the types of permissible subcarrier uses and the manner in which subcarrier operations shall be conducted; *Provided*, however, that remunerative use of a station's subcarrier capacity shall not be detrimental to the provision of existing or potential radio reading services for the blind or otherwise inconsistent wi
its public broadcasting responsibiliti

[48 FR 26615, June 9, 1983]

**§ 73.597 FM stereophonic sound bro
casting.**

A noncommercial educational F
broadcast station may, without spec
ic authority from the FCC, transm
stereophonic sound programs upon i
stallation of stereophonic sound tra
mitting equipment under the pro
sions of §§ 2.977, 2.1001, 73.322, a
73.1590 of the FCC's Rules.

[51 FR 17029, May 8, 1986]

§ 73.599 NCE-FM engineering charts.

This section consists of the following Figures 1 and 2.

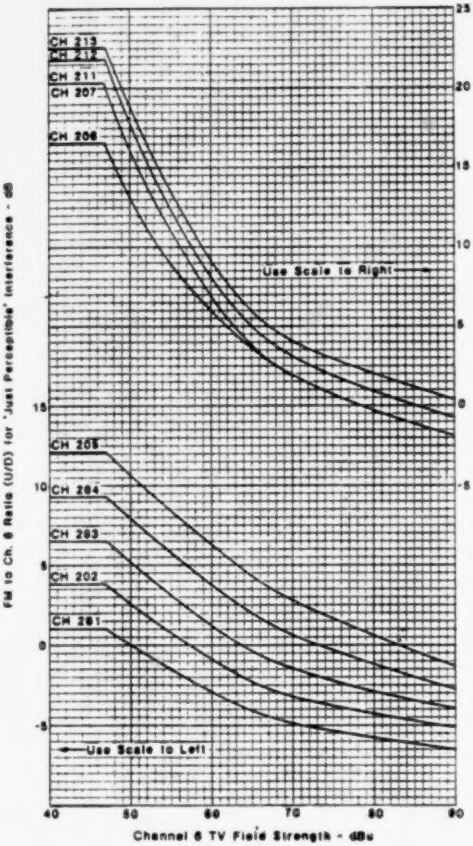


Figure 1
FM/TV 6 PROTECTION RATIOS
BASED ON MEDIAN RECEIVERS
CHANNELS 201-213

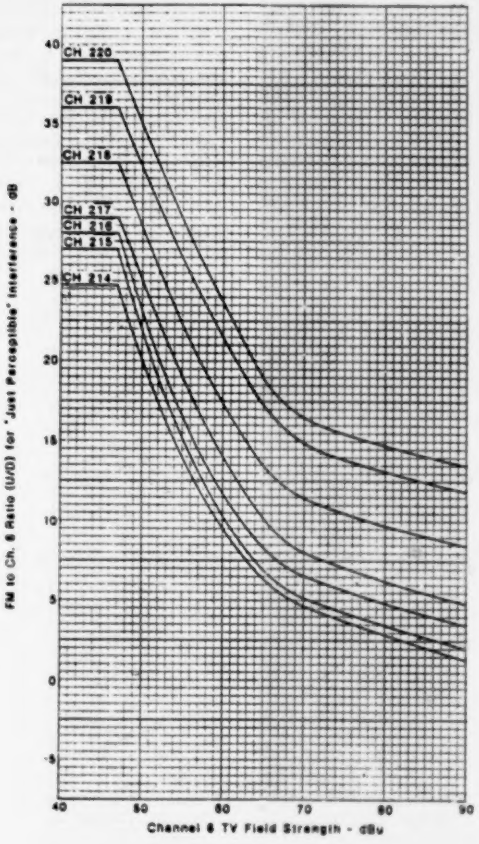


Figure 2
FM/TV 6 PROTECTION RATIOS
BASED ON MEDIAN RECEIVERS
CHANNELS 214-220

[50 FR 27965, July 9, 1985]

Subpart D—[Reserved]

Subpart E—Television Broadcast Stations

§ 73.601 Scope of subpart.

This subpart contains the rules and regulations (including engineering standards) governing TV broadcast stations, including noncommercial educational TV broadcast stations and, where indicated, low power TV and TV translator stations in the United States, its Territories and possessions. TV broadcast, low power TV, and TV translator stations are assigned channels 6 MHz wide, designated as set forth in § 73.603(a).

[47 FR 21494, May 18, 1982]

§ 73.602 Cross reference to rules in other parts.

See § 73.1010.

[43 FR 32781, July 28, 1978]

§ 73.603 Numerical designation of television channels.

(a)

Channel No	Frequency band (MHz)
2	54-60
3	60-66
4	66-72
5	76-82
6	82-88
7	174-180
8	180-186
9	186-192
10	192-198
11	198-204
12	204-210
13	210-216
14	470-476
15	476-482
16	482-488
17	488-494
18	494-500
19	500-506
20	506-512
21	512-518
22	518-524
23	524-530
24	530-536
25	536-542
26	542-548
27	548-554
28	554-560
29	560-566
30	566-572
31	572-578
32	578-584
33	584-590
34	590-596
35	596-602
36	602-608
37	608-614
38	614-620
39	620-626
40	626-632
41	632-638
42	638-644
43	644-650
44	650-656
45	656-662
46	662-668
47	668-674
48	674-680
49	680-686
50	686-692
51	692-698
52	698-704
53	704-710
54	710-716
55	716-722
56	722-728
57	728-734
58	734-740
59	740-746
60	746-752
61	752-758
62	758-764
63	764-770
64	770-776
65	776-782
66	782-788
67	788-794
68	794-800
69	800-806

(b) In Alaska, television broadcast stations operating on Channel 5 (76-82 MHz) and on Channel 6 (82-88 MHz) shall not cause harmful interference to and must accept interference from non-Government fixed operations authorized prior to January 1, 1982.

(c) Channel 37, 608-614 MHz is reserved exclusively for the radio astronomy service.

(d) In Hawaii, the frequency band 488-494 MHz is allocated for nonbroadcast use. This frequency band (Channel 17) will not be assigned in Hawaii for use by television broadcast stations.

[28 FR 13660, Dec. 14, 1963, as amended at 35 FR 11179, July 11, 1970; 39 FR 10576, Mar. 21, 1974; 47 FR 16789, Apr. 20, 1982; 47 FR 30068, July 12, 1982; 47 FR 35989, Aug. 18, 1982; 51 FR 18450, May 20, 1986]

§ 73.606 Table of allotments.

(a) *General.* The following table of allotments contains the channels designated for the listed communities in the United States, its Territories, and possessions. Channels designated with an asterisk are assigned for use by noncommercial educational broadcast stations only. A station on a channel identified by a plus or minus mark is required to operate with its carrier frequencies offset 10 kHz above or below, respectively, the nominal carrier frequencies.

(b) *Table of Allotments.*

ALABAMA

	Channel No.
Andalusia	*2−
Anniston	40−
Arab	56−
Birmingham	6−, *10−, 13−, 21, 42+, *62+, 68−
Decatur	
Demopolis	*41
Dothan	4, 18, *39+, 60−
Florence	15, 26, *36−
Gadsden	44+, 60
Gulf Shores	55
Huntsville	19, *25+, 31+, 48−
Huntsville-Decatur	54
Louisville	*43+
Mobile	5+, 10+, 15+, 21+, *31, *42, and 61
Montgomery	12, 20, *26+, 32, 45−, *63
Munford	*7−, *16−
Opelika	50, 66
Ozark	34
Selma	8, 29−
Troy	67
Tuscaloosa	17, 33, *39−
Tuscumbia	52+
Tuskegee	22−

ALASKA

	Channel No.
Anchorage	2−, 4−, 5, *7−, 11, 13−, and 33
Bethel	*4
Dillingham	*2, 10
Fairbanks	2+, 4+, 7+, *9+, 11+, 13+
Juneau	*3, 8, 10
Ketchikan	2, 4, *9
Seward	3−, 9−
Sitka	13

ARIZONA

[See footnotes at end of tables]

	Channel No.
Ajo	*23−
Coolidge	*43

ARIZONA—Continued

[See footnotes at end of tables]

	Channel No
Douglas	3, *28
Flagstaff	2, 4+, 9, 13, an
Globe	*14+
Green Valley	46
Holbrook	11+, *18+
Kingman	6−, *14−
Lake Havasu City	34+
McNary	*22+
Mesa	12−
Nogales	*16+
Page	*17
Parker	*17−
Phoenix	3+, 5−, *8+, 1 15−, 21, 33, * 45, 61
Prescott	7, *19
Safford	*23+
Sierra Vista	58
Tolleson	51
Tucson	4−, *6+, 9−, 1 18−, *27−, 4
Tucson-Nogales	[2] 11
Yuma	11−, 13+, *16−

ARKANSAS

	Channel No
Arkadelphia	*9+
Batesville	*17
Camden	237A, 246
El Dorado	10−, *30+, 40− and 49−
Fayetteville	*13−, 36
Fort Smith	5−, 24+, 40−
Grosnell	46
Harrison	31+
Hot Springs	*20, 26
Jonesboro	8−, *19+, 48+
Little Rock	*2−, 4, 7−, 11, 16 *36, and 42
Mountain Home	43+
Mountain View	*6−
Pine Bluff	25−, 38−
Rogers	51−
Russellville	*28+

CALIFORNIA

[See footnotes at end of tables]

	Channel No
Alturas	13+
Anaheim	56−
Arcata	23
Avalon	54
Bakersfield	17, 23−, 29, *39− 45, 65+
Barstow	*35+, 64
Big Bear Lake	59+
Bishop	*14−, 20+
Blythe	*22−
Brawley	*26
Chico	12−, *18, 24+, *

CALIFORNIA—Continued

[See footnotes at end of tables]

	Channel No.
Coalinga	*27–
Concord	42
Corona	52
Cotati	*22–
El Centro	7+, 9+
Eureka	3–, 6–, *13–, and 29
Fort Bragg	8–
Fresno	*18+, 24, 30+, 43, 47, 53, 59
Hanford	21
Indio	*19+
Los Angeles	2, 4, 5, 7, 9, 11, 13, 22, *28, 34, *58–, *68–
Merced	51
Modesto	19–, *23+
Novato	68
Oroville	28
Oxnard	63+
Palm Springs	36–, 42
Paradise	30
Porterville	61
Rancho Palos Verdes	44+
Redding	7, *9, 16
Ridgecrest	*25
Riverside	46, 62
Sacramento	3, *6, 10, 29–, 31–, 40–, *52
Salinas-Monterey	8+, 35–, 46–, *56, 67–
San Bernardino	18–, *24–, 30
San Diego	8, 10, *15, 39, 51, 69
San Francisco	2+, 4–, 5+, 7–, *9+, 14+, 20–, 26–, *32+, 38, 44–
San Jose	11+, 36, 48–, *54, 65
San Luis Obispo	6+, *15+, and 33
San Mateo	*60
Santa Anna	40, *50–
Santa Barbara	3-, 14,[1] *20,[1], 38, and *55
Santa Cruz	*16–
Santa Maria	12+
Santa Rosa	50–, *62
Stockton	13+, 58, 64
Susanville	*14
Twentynine Palms	31
Tulare	26+
Vallejo-Fairfield	66
Ventura	51, 57
Visalia	*49
Watsonville	*25+
Willits	11–
Yosemite Valley	41
Yreka City	*20+

COLORADO

	Channel No.
Alamosa	*16
Boulder	*12, 14
Castle Rock	53
Colorado Springs	11, 13, 21

COLORADO—Continued

	Channel No.
Craig	*16+
Denver	2, 4–, *6–, 7, 9–, 20, 31, *41, 50, 59
Durango	6+, *20–, and 33+
Fort Collins	22–
Glenwood Springs	3–, *19+
Grand Junction	5–, 8–, *18+, 4*, 11+
Gunnison	*17–
La Junta	*22+
Lamar	12–, *14–
Leadville	*15–
Longmont	25
Montrose	10+, *22
Pueblo	5, *8, 26+, 32–
Salida	*23+
Steamboat Springs	24+
Sterling	3, *18+
Trinidad	*24

CONNECTICUT

	Channel No.
Bridgeport	43–, *49–
Hartford	3+, 18–, *24, 61+
New Britain	30+
New Haven	8, 59+, 55
New London	26+
Norwich	*53
Waterbury	20

DELAWARE

	Channel No.
Dover	*34
Seaford	38, *64
Wilmington	*12, 61

DISTRICT OF COLUMBIA

	Channel No.
Washington	4–, 5–, 7+, 9, 14–, 20+, *26–, *32+, 50

FLORIDA

	Channel No.
Boca Raton	*63
Bradenton	*19, 66
Bunnell	58
Cape Coral	36
Clearwater	22
Clermont	18–
Cocoa	52, *68
Crystal River	39–
Daytona Beach	2–, 26
Destin	64+

FLORIDA—Continued

	Channel No.
Fort Lauderdale	51
Fort Myers	11+, 20+, *30
Fort Pierce	*21–, 34
Fort Walton Beach	35, 53, 58
Gainesville	*5–, 20, 61+
High Springs	53+
Hollywood	69
Inverness	64
Islamorada	*9+
Jacksonville	4+, *7, 12+, 17, 30+, 47–, *59
Kenansville	31
Key West	8, *13, and 22+
Lake City	*41
Lake Worth	67
Lakeland	32
Leesburg	*45–, 55
Live Oak	57–
Madison	*36–
Marathon	16+
Marianna	*16+, 51
Melbourne	43+, 56
Miami	*2, 4, 6, 7–, 10+, *17–, 23–, 33, 35, 39, and 45+
Naples	26–, 46
New Smyrna Beach	*15+
Ocala	*29, 51–
Orange Park	25–
Orlando	6–, 9, * 24–, 27, 35+, and 65
Palatka	*42, 63+
Panama City	7+, 13, 28–, *56, 46
Panama City Beach	46
Pensacola	3–, *23, 33+, 44
St. Petersburg	10–, 38, 44+
Sarasota	40
Sebring	*48, 60
Stuart	59
Tallahassee	*11–, 24, 27+, 40+
Tampa	*3, 8–, 13–, *16, 28, and 50
Tequesta	25
Tice	49
Venice	62
West Palm Beach	5, 12, 29+, *42+, 61

GEORGIA

	Channel No.
Albany	10, 19–, 31–, and 52–
Ashburn	*23+
Athens	*8–, 34
Atlanta	2, 5–, 11+, 17–, *30, 36, 46–, *57+, 69
Augusta	6+, 12–, 26, 54–
Bainbridge	49
Baxley	34
Brunswick	21+
Carrollton	*49–
Carnesville	*52
Cedartown	*65–
Chatsworth	*18–
Cochran	*29+
Columbus	3, 9+, *28, 38+, *48, 54+

GEORGIA—Continued

	Channel N
Cordele	55+
Dalton	23
Dawson	*25
Draketown	*27–
Elberton	*60+
Flintstone	*41–
Lafayette	*35
Macon	13+, 24+, 41, *47+, 64–
Monroe	63
Pelham	*14–
Perry	58+
Rome	14+
Royston	*22+
Savannah	3, *9–, 11, 22, 2
Thomasville	6
Toccoa	32–, *68–
Valdosta	*33, 44–
Vidalia	*18+
Warm Springs	
Warner Robbins	35–
Waycross	*8+
Wrens	*20–
Young Harris	*51–

EFFECTIVE DATE NOTE: At 55 FR 38551, Septem 1990, Baxley, Channel 34 was added, effective Octo 1990.

HAWAII

	Channel N
Hilo (Hawaii)	2, *4, 9, 11, 13, 1 20+, 28+, *3 *38+
Honolulu (Oahu)	2+, 4–, 5, 9–, *11+, 13–, 1 20, 26, 32, *3 and *44
Kailua-Kona (Hawaii)	6
Lihue (Kauai)	3+, *8–, 10+, 1 15–, *21–, 2 *67
Wailuku (Maui)	3, 7, *10, 12, 15, 2 *27, *33

IDAHO

	Channel N
Boise	2, *4+, 7, 14
Burley	*17+
Caldwell	9–
Coeur d'Alene	*26+
Filer	*19–
Grangeville	*15–
Idaho Falls	3, 8+, 20, *33+
Lewiston	3–
Moscow	*12–
Nampa	6, 12+
Preston	*26
Pocatello	6–, *10, 15, 25+, 31–
Sandpoint	*16+
Sun Valley	5–
Twin Falls	11, *13–, 35
Weiser	*17

ILLINOIS

[See footnotes at end of tables]

	Channel No
Aurora	60
Bloomington	43
Carbondale	*8
Champaign	3+, 15–
Charleston	*51+
Chicago	2–, 5, 7, 9+, *11, *20, 26, 32, 38–, 44
Danville	68
Decatur	17, 23–
DeKalb	*33, *48–
East St. Louis	46
Edwardsville	*18–
Elgin	*66+
Freeport	23, *65–
Galesburg	67
Harrisburg	3
Jacksonville	*14
Joliet	*14–, 66+
Kankakee	*54–
LaSalle	35
Macomb	*22+
Marion	27
Moline	8, *24–
Mount Vernon	13+
Olney	*16–
Paris	46+
Peoria	19, 25+, 31+, *47–, 59+
Pontiac	53
Quincy	10–, 16+, *27+
Rockford	13, 17+, 39
Rock Island	4+
Springfield	20+, 49–, 55+, *65+
Streator	*63
Urbana	*12–, 27–
Vandalia	*21

INDIANA

	Channel No
Anderson	67+
Angola	63
Bloomington	4, *30–, 42+ and 63+
Elkhart	28+
Evansville	7, *9+, 14–, 25–, and 44
Fort Wayne	15+, 21+, 33–, *39–, 55
Gary	50, *56+
Hammond	62+
Indianapolis	6, 8–, 13–, *20–, 40, 59–, *69
Kokomo	29–
Lafayette	18, *24
Madison	*60+
Marion	23
Muncie	49, *61
Richmond	43+
Salem	58+
South Bend	16, 22, *34–, 46
Terre Haute	2+, 10, *26–, 38
Vincennes	*22–

IOWA

	Channel No
Ames	5, 23–, *34+
Burlington	26–, *57–
Carroll	*18–, 30+, and 52
Cedar Rapids	2, 9–, 28+, and 48–
Centerville	*31–
Council Bluffs	*32
Davenport	6+, 18+, 30–, *36+
Decorah	*14+
Des Moines	8–, *11+, 13–, 17+, *43–, 63–, 69
Dubuque	16–, *29–, 40–
Estherville	*49+
Fort Dodge	*21
Fort Madison	*38+
Hampton	50
High Point	*14–
Iowa City	*12+, 20–
Keokuk	*44+
Keosauqua	*54+
Lansing	*41+
Mason City	3+, *24+
Mount Ayr	*25–
Newton	39+
Ottumwa	15+, *33–
Red Oak	*36
Rock Rapids	*25+
Sibley	*33
Sioux City	4–, 9, 14, *27–
Spirit Lake	*38
Waterloo	7+, 22–, *32–

KANSAS

	Channel No
Chanute	*30+
Colby	4
Columbus	*48–
Dodge City	*21–
Emporia	*25+
Ensign	6+
Fort Scott	20+
Garden City	11+, 13–, *18
Goodland	10
Great Bend	2
Hays	7–, *9
Hutchinson	*8, 12, 36+
Junction City	31
Lakin	*3
Lawrence	38
Liberal	5+
Manhattan	*21
Oakley	*15–
Parsons	*39
Phillipsburg	*22–
Pittsburg	7+ and 14
Pratt	*32+
Randall	
Salina	18+, 34–, 44
Sedan	*28
Topeka	*11, 13+, 27, 43, 49
Wichita	3–, 10–, *15+, 24–, 33, *42

KENTUCKY

	Channel No.
Ashland	*25, 50 –, 61 +
Beattyville	65
Blanco	52 +
Bowling Green	13, *24 –, 40 +, *53 –, 59 +
Campbellsville	34
Covington	*54 +
Danville	56
Elizabethtown	*23 +
Harlan	44 –
Hazard	*35 +, 57 –
Hopkinsville	51
Lexington	18 +, 27 –, 36, *46, 62
Louisville	3 –, 11, *15, 21 –, 32 –, 41 +, *68 +
Madisonville	19–, *35–, and 57 +
Morehead	*38 +, 67 –
Murray	*21 +, 38
Owensboro	31 –, 48, 61 +
Owenton	*52 +
Paducah	6 +, 29 and 49
Paintsville	69 +
Pikeville	*22 –, 51 +
Somerset	16, *29 +

LOUISIANA

	Channel No.
Alexandria	5, *25 +, 31 +, 41 +
Baton Rouge	2, 9–, *27 +, 33–, and 44 +
Columbia	11 +
De Ridder	*23 –
Hammond	62 +
Houma	11
Lafayette	3 +, 10, 15, *24
Lake Charles	7 –, *18 –, 29 –
Minden	21 +
Monroe	8 +, *13, 14 –, 39 +
Morgan City	*14 +
Natchitoches	*20 +
New Iberia	36 –
New Orleans	4 +, 6, 8 –, * 12, 20 –, 26, * 32 +, 38 +, and 49
Shreveport	3 –, 12, *24 –, 33, and 45 +
Slidell	54 +
Tallulah	*19

MAINE

	Channel No.
Augusta	*10 –
Bangor	2 –, 5 +, 7 –
Calais	*13 –
Fort Kent	*46 +
Fryeburg	*18 +
Houlton	*25 +
Kittery	*39
Lewiston	8 –, 35 –
Millinocket	*44 –
Orono	*12 –

MAINE—Continued

	Channel No
Portland	6 –, 13 +, *28 –,
Presque Isle	8, *10 +, 62 +
Rumford	*43 +
Waterville	23 –

MARYLAND

	Channel No
Annapolis	*22 +
Baltimore	2 +, 11 –, 13 +, 24–, 45, 54, *67–
Cumberland	52 +, 65
Frederick	*62
Hagerstown	25–, *31, and 68–
Oakland	*36 +
Salisbury	16 +, *28 –, 47–
Waldorf	*58 +

MASSACHUSETTS

[See footnotes at end of tables]

	Channel No
Boston	*2 +, 4 +, 5 –, 7 + 25 +, 38, *44, 5 68 +
Greenfield	32 +
Middleton	62
New Bedford	6 +, 28 –, *34
North Adams	19, *35
Norwell	46 +
Pittsfield	51 +
Springfield	22, 40, *57 +
Vineyard Haven	58 +
Worcester	14, ¹27, *48 +, 6

MICHIGAN

	Channel No
Alpena	*6, 11
Ann Arbor	31 +, *58 +
Bad Axe	* 15 –, 41 –
Battle Creek	41 +, and 43–
Bay City	5 –, *19 +, 61 +
Cadillac	9, *27, 33
Calumet	5 –, *22 –
Cheboygan	4 +
Detroit	2 +, 4, 7 –, 20 +, 50 –, *56, 62
East Lansing	*23 –, *69–
Escanaba	3 +
Flint	12 –, *28 –, 66–
Grand Rapids	8 +, 13 +, 17 –, *35 +
Iron Mountain	8 –, *17 +
Ironwood	*15 –, 24 +
Jackson	18 +
Kalamazoo	3 –, *52 +, 64
Lansing	6 –, 47, 53 –
Manistee	*21
Manistique	*15 +
Marquette	6 –, *13, 19

MICHIGAN—Continued

	Channel No
Mount Clemens	38 +
Mount Pleasant	*14
Muskegon	54 +
Parma	10 –
Petoskey	*23 +
Port Huron	46 +
Saginaw	25 –, 49 –
Sault Ste. Marie	8, 10 +, *32 –
Traverse City	7 +, 29 –
West Branch	*24

MINNESOTA

	Channel No
Alexandria	7, * 24, and 42
Appleton	*10 –
Austin	6 –, *15 –
Bemidji	*9, 26 +
Brainerd	*22
Crookston	*33
Duluth	3, *8, 10 +, 21 +, 27 –
Ely	*17 –
Fairmont	*16 +
Hibbing	13 –, *18 –
International Falls	11, *35 +
Mankato	12, *26 –
Marshall	*30 –
Minneapolis-St. Paul	*2 –, 4 +, 5 –, 9 +, 11 –, *17, 23 +, 29 +, and 45
Redwood Falls	43
Rochester	10, 47 –
St. Cloud	19, *25 –, 41
St. James	32 +
Thief River Falls	10, *30
Wadena	*20 –
Walker	12 –, 38 –
Willmar	*14 –
Winona	*35 +, 44 –
Worthington	*20

MISSISSIPPI

	Channel No.
Biloxi	13 +, *19 +, 25 –
Booneville	*12 –
Bude	*17 +
Clarksdale	*21
Cleveland	*31 –
Columbia	*45
Columbus	4 –, 27, *43
Greenville	15 –, 44
Greenwood	6 +, *23 +
Grenada	22 +
Hattiesburg	22, *47
Holly Springs	40
Houston	45 +
Jackson	3, 12 +, 16, *29 +, 40 +, and 51
Laurel	7, 18 +
Magee	34 +
Meridian	11 –, *14, 24 –, 30 –
Mississippi State	*2 +

MISSISSIPPI—Continued

	Channel No
Natchez	*42 +, 48
Oxford	*18
Senatobia	*34 –
Tupelo	9 –, 35 +
Vicksburg	35 –
Wiggins	43 –, 56 +
Yazoo City	*32 –

MISSOURI

	Channel No
Birchtree	*20 –
Bowling Green	*35 +
Cape Girardeau	12, 23, *39 –
Carrollton	*18
Columbia	8 +, 17 – *23 +
Flat River	*22
Hannibal	7 –
Jefferson City	13, 25, *36 –
Joplin	12 +, 16, *26 –
Kansas City	32-
King City	*28 –
Kirksville	3 –
LaPlata	*21 +
Lowry City	*15 –
Poplar Bluff	15 +, *26 +, 55
Rolla	*28
St. Joseph	2 –, 16 –, 22
St. Louis	2, 4 –, 5 –, *9, 11 –, 24 +, 30 +, *40 –, *46
Sedalia	6
Springfield	3 +, 10, *21 –, 27 –, 33—

MONTANA

	Channel No
Anaconda	2 +
Billings	2 –, 6, 8, *11, 14, 20 +
Bozeman	7 –, *9
Butte	*2 +, 4, 6 +, 18, 24
Cut Bank	*14 –
Dillon	*14 +
Glendive	5 +, 13 +, *16 –
Great Falls	3 +, 5 +, 16, 26, *32
Hardin	4 +
Havre	9 +, 11 –, and *18 –
Helena	10 +, 12, *15 +
Joplin	35 –, 48, 54 –
Kalispell	9 –, *29 –
Lewistown	13
Miles City	3 –, *10
Missoula	8 –, *11 +, 13 –, 17 –, and 23 –
Sikeston	45
Wolf Point	*17 +

NEBRASKA

	Channel No.
Albion	8+, *21+
Alliance	*13-
Bassett	*7-
Beatrice	23+
Falls City	*24
Grand Island	11-, 17
Hastings	5-, *29+
Hayes Center	6
Hay Springs-Scottsbluff	4+
Kearney	13
Lexington	*3+
Lincoln	10+, *12-, 45, 51
McCook	8-, 16+, 12
Merriman	*12
Norfolk	*19+
North Platte	235, 246, 278
Omaha	3, 6+, 7, 15, *26, 42+, *48-, and 54
Orchard	16
Pawnee	33+
Scottsbluff	10-, 16
Superior	4+

NEVADA

	Channel No.
Boulder City	5+
Elko	10-, *14+
Ely	3-, 6+
Fallon	*25
Goldfield	7-
Las Vegas	3, 8-, *10+, 13-, 15+, 21+, and 33+
McGill	*13
Paradise	39+
Pawnee City	*33+
Reno	2, 4, *5, 8, 11, 21+, and 27+
Tonopah	9-, *17+
Winnemucca	7+, *15-
Yerington	*16+

NEW HAMPSHIRE

[See footnotes at end of tables]

	Channel No.
Berlin	*40-
Concord	21+
Durham	*11
Hanover	*15+, 31
Keene	*52+
Littleton	*49+
Manchester	9-, 50-, 60+
Portsmouth	*17-

NEW JERSEY

	Channel No.
Atlantic City	*36, 53+, 62-
Burlington	48-
Camden	*23+
Little Falls	*50+
Newark	13-, 68
New Brunswick	47+, *58
Newton	63
Paterson	41-
Secaucus	9+
Trenton	*52-
Vineland	59-, 65-
West Milford	*66-
Wildwood	40

NEW MEXICO

	Channel No.
Alamogordo	*18-
Albuquerque	4+, *5+, 7+, 13+, 14-, 23-, *32+, 41, 50
Carlsbad	6-, *15+, 25-
Clayton	*17
Clovis	12-
Deming	*16
Farmington	12+, *15+
Gallup	3, *8-, 10
Hobbs	29+
Las Cruces	*22-, 48+
Lovington	*19
Portales	*3+
Raton	*18-
Roswell	8, 10-, 21-, 27-, *33+
Santa Fe	2+, *9+, 11-, 19-
Silver City	6, 10+, *12
Socorro	*15-
Tucumcari	*15

NEW YORK

[See footnotes at end of tables]

	Channel No.
Albany-Schenectady	6, 10-, 13, *17+, 23-, *29+, 45
Amsterdam	*39+, 55
Arcade	62-
Batavia	51-
Bath	14-
Binghamton	12-, 34, 40-, *46+
Buffalo	2, 4, 7+, 17, *23, 29-, 49-
Carthage	7-
Corning	*30, 48+
Elmira	18+, 36-
Glens Falls	*58-
Ilion	67-
Ithaca	52, *65+
Jamestown	26+, *46
Kingston	62+
Lake Placid	5, *34+
Levittown	*21-
Massena	*18

NEW YORK—Continued

[See footnotes at end of tables]

	Channel No
New York	2, 4, 5 +, 7, 11 +, *25, 31-
Oneonta	[1]15, *42
Patchogue	67
Plattsburg	*57
Poughkeepsie	54 +
Riverhead	55 +
Rochester	8, 10 +, 13 –, *21, 31 +, *61 +
Saranac Lake	61 –
Springville	67 +
Syracuse	3 –, 5 –, 9 –, *24 +, 43 +, 56 +, and 62 +
Utica	2 –, 4 –, 20 +, 33, *59
Watertown	*16, 50 +

NORTH CAROLINA

	Channel No
Andrews	*59
Asheville	13 –, 21 +, *33, 62 +
Belmont	46 +
Bryson City	*67
Burlington	16
Canton	*27
Chapel Hill	*4 +
Charlotte	3, 9 +, 18, 36, *42 +
Columbia	*2
Concord	*58
Cullowhee	50 +
Durham	11 +, 28 +
Fayetteville	40 +, 62
Forest City	66 +
Franklin	*56 +
Goldsboro	17 –
Greenville	9 –, 14, *25, and 38 +
Hickory	14 –
High Point	8 –, *32 +, 67 +
Jacksonville	*19, 35
Kannapolis	64 –
Laurel Hill	59 +
Lexington	20
Linville	*17
Lumberton	*31
Manteo	4
Morehead City	8 +
Morganton	23 –
New Bern	12 +
Raleigh	5, 22, *34, 50 +
Roanoke Rapids	*36 –
Rockingham	*53
Rocky Mount	47 +
Washington	7
Waynesville	59
Wilmington	3-, 6, 26-, *39-
Wilson	30 –
Winston-Salem	12, *26 +, 45

NORTH DAKOTA

	Channel No
Bismarck	*3, 5, 12 –, 17 –, 26 +
Devils Lake	8 +, *22 +
Dickinson	2 +, *9 –, 7
Ellendale	*19 –
Fargo	6, 11 +, *13, 15 –
Grand Forks	*2, 14 +, 27 +
Jamestown	7 –, *23
Minot	*6 +, 10 –, 13 –, 14 –, 24
Pembina	12
Valley City	4 –
Williston	*4, 8 –, 11 –, *15 –

OHIO

[See footnotes at end of tables]

	Channel No
Akron	23 +, *49 +, 55 –
Alliance	*45 +
Ashtabula	[1]15
Athens	20*, 63 –
Bowling Green	*27 +
Cambridge	*44 –
Canton	17 –, 67
Chillicothe	53
Cincinnati	5 –, 9, 12, 19 +, *48 –, 64 –
Cleveland	3, 5 +, 8, 19, *25 +, 61
Columbus	4 –, 6 +, 10 +, 28 –, *34, *56 –
Dayton	2, 7 +, *16 +, 22 +, 45
Defiance	65 +
Hillsboro	*24 +, 55 +
Lima	35 –, 44 +, *57 +, 17
Lorain	43
Mansfield	*47 +, 68 –
Newark	*31 –, 51
Oxford	*14 +
Portsmouth	30, *42 –
Sandusky	52
Springfield	26 +, *66
Steubenville	9 +, *62 +
Toledo	11 –, 13, 24 –, *30 +, 36 –, and 40 –
Xenia	32
Youngstown	21 –, 27, 33, *58
Zanesville	18 –

OKLAHOMA

[See footnotes at end of tables]

	Channel No
Ada	10 +, *22
Altus	*27
Ardmore	12 –, [1]*17, *28 –
Bartlesville	17 +
Cheyenne	12 +
Claremore	*35
Duncan	40 +

OKLAHOMA—Continued

[See footnotes at end of tables]

	Channel No.
Elk City	8+, *15–, and 31
Enid	20–, *26+
Eufaula	*3
Grove	45+
Guymon	9+, *16
Hugo	42+, ¹*15+, *48+
Lawton	7+, *36–, 16–, 45
McAlester	*32–
Miami	*18–
Muskogee	19
Norman	46–
Oklahoma City	4–, 5, 9–, *13, 14–, 25–, 34–, 43+, 52, and 62+
Okmulgee	44–
Shawnee	30
Tulsa	2+, 6+ 8–, *11–, 23, 41+, 47, 53, and *63
Woodward	*17–

OREGON

	Channel No.
Astoria	*21
Bend	*3+, *15, 21+
Brookings	*14–
Burns	*18
Coos Bay	23+, 41
Corvallis	*7–
Eugene	9+, 13, 16+, *28–, and 34
Grants Pass	*18+, 30+
Klamath Falls	2–, *22+, and 31
LaGrande	*13+, 16
Medford	5, *8+, 10+, 12+, and 26+
North Bend	11, *17+
Pendleton	11–
Portland	2, 6+, 8–, *10, 12, 24+, *30, 40–
Roseburg	4+, 36
Salem	22, 32
The Dalles	*17–

PENNSYLVANIA

[See footnotes at end of tables]

	Channel No.
Allentown	*39, 69
Altoona	10–, 23–, 47, *57+
Bethlehem	60–
Clearfield	*3+
Erie	12, 24, 35+, *54+, 66+
Greensburg	40+
Harrisburg	21+, 27–, *33+
Hazleton	56
Johnstown	6, 8–, 19+, *28+
Lancaster	8+, 15+
Lebanon	55–

PENNSYLVANIA—Continued

[See footnotes at end of tables]

	Channel No.
Philadelphia	3, 6–, 10, 17–, 2 *35–, 57
Pittsburgh	2–, 4+, 11, *13- *16, 22, 53+
Reading	51
Scranton	16–, 22–, 38+, *44–, 64
State College	29+, and *59+
Wilkes Barre	28
Williamsport	¹20–, 53–
York	43, 49+

RHODE ISLAND

[See footnotes at end of tables]

	Channel No.
Block Island	69–
Providence	10+, 12+, *18, *3 64+

SOUTH CAROLINA

	Channel No.
Aiken	*44
Allendale	*14
Anderson	40
Beaufort	*16–
Charleston	2+, 4, 5+, *7–, 2 and 36+
Columbia	10–, 19+, 25–, *35+, 47, 57–
Conway	*23+
Florence	13+, 15–, 21, *3
Georgetown	*41–
Greenville	4–, 16+, *29
Greenwood	*38, 48+
Myrtle Beach	32, 43+
Rock Hill	30+, 55–
Spartanburg	7+, 49
Sumter	*27– and 63–

SOUTH DAKOTA

	Channel No.
Aberdeen	9–, *16–
Allen	22+
Brookings	*8
Eagle Butte	*13
Huron	12+
Lead	5–, 11+
Lowry	*11–, 56, 62+, 6
Martin	*8–
Mitchell	5+
Pierre	4, *10+
Rapid City	3+, 7+, *9, 15– 21–
Reliance	6–
Seneca	*2–

SOUTH DAKOTA—Continued

	Channel No.
Sioux Falls	11, 13+, 17-, *23, 36+
Vermillion	*2+
Watertown	3-

TENNESSEE

	Channel No.
Athens	*24
Chattanooga	3+, 9, 12+, *45, 61-
Cleveland	53
Cookeville	*22, 28+
Crossville	20+, *55+
Fayetteville	*29-
Greeneville	39-
Hendersonville	50
Jackson	7+, 16+, *32+
Jellico	54-
Johnson City	11-, *41
Kingsport	19
Knoxville	6, 8, 10+, *15-, 26-, 43+
Lebanon	66—
Lexington	*11+
Livingston	60-
McMinnville	33+
Memphis	3-, 5+, *10+, 13+, *14+, 24, 30, and 50+
Murfreesboro	39+
Nashville	2-, 4+, 5, *8+, 17+, 30+, *42, and 58
Sneedville	*2+
Tullahoma	64+
Union City	41

TEXAS

	Channel No.
Abilene	9+, 15, *26+, 32+
Alpine	12-
Alvin	67
Amarillo	*2+, 4, 7, 10, 14+
Austin	7+, *18+, 24, 36, 42-, and 54
Bay City	*43+
Baytown	57+
Beaumont	6-, 12-, 21, *34-
Big Spring	4-, *14
Blanco	52+
Boquillas	8-
Brady	13
Brownsville	23
Bryan	3, 28
Childress	*21
College Station	*15, 50-
Conroe	49+ and 55+
Corpus Christi	3-, 6, 10-, *16, 28-, 38+
Crockett	40
Dallas	4+, 8, *13+, 27-, 33+, 39, and 58

TEXAS—Continued

	Channel No.
Decatur	29
Del Rio	10, *24+
Denton	*2
Eagle Pass	16+
El Paso	4, 7, 9, *13, 14, 26+, *38—, and 65
Farwell	18+
Fort Stockton	5+
Fort Worth	5+, 11-, 21-, *31+, and 52-
Fredericksburg	2+
Galveston	*22, 48
Greenville	47+
Harlingen	4+, *44, 60
Houston	2-, *8, 11+, 13-, *14, 20, 26, 39-, and 61
Irving	49
Jacksonville	56
Katy	51+
Kerrville	35+
Killeen	62
Lake Dallas	55
Laredo	8, 13, 27-, *39
Llano	14-
Longview	16+, 51-, and 54+
Lubbock	*5-, 11, 13-, 16+, 28, and 34-
Lufkin	9
McAllen	48
Marfa	3
Marshall	*22-, 35+
Midland	2-, 18
Mineola	64+
Monahans-Odessa	9-
Nacogdoches	19-, *32
Odessa	7-, 24-, 30, *36+, and 42
Palestine	43
Paris, Texas	36+, 42+
Port Arthur	4-
Presidio	7+
Richardson	23
Rio Grande City	40
Rosenberg	45
San Angelo	3-, 6, 8+, *21+
San Antonio	4, 5, *9-, 12+, *23-, 29+, 41+, and 60+
Sherman	20-, *26-
Sonora	11+
Sulphur Springs	18
Sweetwater	12
Temple	6+, 46-
Texarkana	6, 17-, *34
Tyler	7, 14+, *38, and 60
Uvalde	26-
Victoria	19+, 25, 31, and *47
Waco	10+, 25+, *34+, 44-
Weslaco	5-
Wichita Falls	3+, 6-, 18-, *24
Wolfforth	22-

UTAH

	Channel No.
Cedar City	4, *16 +
Logan	12 –, *22
Moab	*14 +
Monticello	*16 –
Ogden	*9 +, *18 –, 24, 30
Price	3 +, *15
Provo	*11 –, 16, 32
Richfield	8 +, *19
Salt Lake City	2 –, 4 –, 5 +, *7 –, 13 +, 14 –, 20 +, *26 –
St. George	12, *18-
Vernal	6, *17 +

VERMONT

	Channel No.
Burlington	3, 22 +, *33 –, 44 +
Rutland	*28 +
St. Johnsbury	*20 –
Windsor	*41

VIRGINIA

	Channel No.
Ashland	65 +
Blacksburg	*43, 65 –
Bristol	5 +, *28 –
Bluefield	*63 +
Charlottesville	29 –, *41 –, 64 +
Courtland	*52
Danville	24 –, 44 +, *56
Farmville	*31 –
Fairfax	*56 –
Fredericksburg	*53, 69 +
Front Royal	*42
Grundy	68
Harrisonburg	3 –
Lynchburg	13, 21 –, *54 +
Manassas	66 +
Marion	*52 –
Norfolk-Portsmouth-Newport News-Hampton.	3 +, 10 +, 13 –, *15, 27, 33, 49 – and *55 +
Norton	*47 –
Onancock	*25 +
Petersburg	8
Richmond	6 +, 12 –, *23, 35 +, *57 –, 63
Roanoke	7-, 10, *15 +, 27 +, 38 –, and 60
Staunton	*51 –
Virginia Beach	43 +
West Point	*46

WASHINGTON

	Channel No.
Anacortes	24
Bellevue	33 +, 51 +
Bellingham	12 +, *34, 64

WASHINGTON—Continued

	Channel No.
Centralia	*15 +
East Wenatchee	249A
Everett	16 –
Kennewick	42 +
Morton	39
Olympia	67
Pasco	19 –
Pullman	*10 –, 24 +
Richland	25, *31
Rochester	26 +
Seattle	4, 5 +, 7, *9, 22 +, 45 +, and *62
Spokane	2 –, 4 –, 6 –, *7 + 22, 28 –, and 34-
Tacoma	11 +, 13 –, 20, *28, and *56
Vancouver	*14, 49
Walla Walla	14 –
Wenatchee	*18 +, 27
Yakima	23 +, 29 +, 35, *47

WEST VIRGINIA

[See footnotes at end of tables]

	Channel No.
Beckley	4
Bluefield	6 –, 40 –
Charleston	8 +, 11 +, 23, 29 *49 –
Clarksburg	12 +, 46 –
Fairmont	66 –
Grandview	*9 –
Huntington	3 +, 13 +, *33 +
Keyser	*30 +
Lewisburg	59
Martinsburg	*44, 60 +
Morgantown	*24 –
Parkersburg	15 –, 39 +, *57
Weirton	*50 +
Weston	5
Wheeling	7, [1] 14, *41
Williamson	*31 +

WISCONSIN

	Channel No.
Appleton	32 +
Bloomington	*49
Chippewa Falls	48
Colfax	*28 –
Crandon	4
Eau Claire	13 +, 18
Fond du Lac	68
Green Bay	2 +, 5 +, 11 +, 26 + *38, 44 +
Highland	*51
Janesville	57 +
Kenosha	55 –
Kieler	*46 +
LaCrosse	8 +, 19 +, 25, *31
Madison	3, 15, *21 –, 27 + 47 +
Manitowoc	16 +
Marshfield	39 –

WISCONSIN—Continued

	Channel No.
Mayville	52
Milwaukee	4 –, 6, *10 +, 12, 18 –, 24 +, 30, *36, and 58
Oshkosh	22 + and *50 +
Park Falls	*36 +
Racine	49 +
Rhinelander	12 +
Rice Lake	16
Richland Center	45 +
Sheboygan	28
Sturgeon Bay	42
Superior	6 +, 40
Suring	14 –
Tomah	43
Wausau	7 –, 9, *20 +, 33 –

WYOMING

	Channel No.
Casper	2 +, *6 +, 13 +, 14 –, 20 –
Cheyenne	5 +, *17, 27 –, 33 –
Jackson	2, 11 +
Lander	*4, 5
Laramie	*8 +
Rawlins	11 –
Riverton	10 +
Rock Springs	13
Sheridan	7, 9 +, 12 +

U.S. TERRITORIES AND POSSESSIONS

[See footnotes at end of tables]

	Channel No.
Guam:	
Agana	*4, 8, 10, *12
Tamuning	14
Puerto Rico:	
Aguada	50
Aguadilla	*32, 44
Arecibo-Aguadilla	12 +
Arecibo	54, 60
Bayamon	36
Caguas	11 –, *58
Carolina	52
Cayey	
Fajardo	13 +, 34, and *40
Guayama	46
Humacoa	68
Mayaguez	3 +, 5 –, 16, 22
Ponce	7 +, 9 –, 14, 20, *26, 48
San Juan	2 +, 4 –, *6 +, 18, 24, 30, and *62
San Sebastian	38
Utuado	
Vega Baja	64
Yauco	42
Virgin Islands:	
Charlotte Amalie	10 –, 17, *23, 43
Charlotte Amalie-Christiansted	*3, [6]*12
Christiansted	8 +, 15, *21, 27

Footnotes to tables:

[1] Following the decision in Docket No. 18261, channels so indicated will not be available for television use until further action by the Commission.

[2] Operation on this channel is subject to the conditions, terms, and requirements set out in tha Report and Order in Docket No. 19075, RM-1645, adopted January 5, 1972, released January 7, 1972, FCC 72-19.

[3] [Reserved]

[4] This channel is not available for use at Elgin unless and until it is determined by the Commission that it is not needed for use at Joliet, Ill.

[5] [Reserved]

[6] Stations using these allotments shall limit radiation toward stations on the same channel in Puerto Rico, to no more than the effective radiated power which would be radiated by an omnidirectional radio station using maximum permissible effactive radiated power for antenna height above average terrain, at the minimum distances from such stations specified in § 73.610(b). The FCC shall consider the status of the negotiations with the appropriate British authorities concerning these allotments when the applications for construction permits come before the FCC.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[28 FR 13660, Dec. 14, 1963]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 73.606, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 73.607 Availability of channels.

Applications may be filed to construct TV broadcast stations only on the channels designated in the Table of Allotments (§ 73.606(b)) and only in the communities listed therein. Applications which fail to comply with this requirement, whether or not accompanied by a petition to amend the Table, will not be accepted for filing. However, applications specifying channels which accord with publicly announced FCC Orders changing the Table of Allotments will be accepted for filing even though such applications are tendered before the effective dates of such channel changes.

[51 FR 44070, Dec. 8, 1986]

§ 73.609 Zones.

(a) For the purpose of allotment and assignment, the United States is divided into three zones as follows:

(1) Zone I consists of that portion of the United States located within the confines of the following lines drawn on the U.S. Albers Equal Area Projection Map (based on standard parallels 29½° and 45½°; North American datum): Beginning at the most easterly point on the State boundary line between North Carolina and Virginia; thence in a straight line to a point on the Virginia-West Virginia boundary line located at north latitude 37°49′ and west longitude 80°12′30″; thence

westerly along the southern boundary lines of the States of West Virginia, Ohio, Indiana, and Illinois to a point at the junction of the Illinois, Kentucky, and Missouri State boundary lines; thence northerly along the western boundary line of the State of Illinois to a point at the junction of the Illinois, Iowa, and Wisconsin State boundary lines; thence easterly along the northern State boundary line of Illinois to the 90th meridian; thence north along this meridian to the 43.5° parallel; thence east along this parallel to the United States-Canada border; thence southerly and following that border until it again intersects the 43.5° parallel; thence east along this parallel to the 71st meridian; thence in a straight line to the intersection of the 69th meridian and the 45th parallel; thence east along the 45th parallel to the Atlantic Ocean. When any of the above lines pass through a city, the city shall be considered to be located in Zone I. (See Figure 1 of § 73.699.)

(2) Zone II consists of that portion of the United States which is not located in either Zone I or Zone III, and Puerto Rico, Alaska, Hawaiian Islands and the Virgin Islands.

(3) Zone III consists of that portion of the United States located south of a line, drawn on the United States Albers Equal Area Projection Map (based on standard parallels 29.50 and 45.50 North American datum), beginning at a point on the east coast of Georgia and the 31st parallel and ending at the United States-Mexican border, consisting of arcs drawn with a 241.4 kilometer (150 mile) radius to the north from the following specified points:

	North latitude	West longitude
(a)	29°40'00"	83°24'00"
(b)	30°07'00"	84°12'00"
(c)	30°31'00"	86°30'00"
(d)	30°48'00"	87°58'30"
(e)	30°00'00"	90°38'30"
(f)	30°04'30"	93°19'00"
(g)	29°46'00"	95°05'00"
(h)	28°43'00"	96°39'30"
(i)	27°52'30"	97°32'00"

When any of the above arcs pass through a city, the city shall be considered to be located in Zone II. (Se Figure 2 of § 73.699.)

[28 FR 13660, Dec. 14, 1963, as amended 33 FR 15422, Oct. 17, 1968; 50 FR 23 June 5, 1985; 51 FR 44070, Dec. 8, 1986]

§ 73.610 Minimum distance separatio between stations.

(a) The provisions of this sectio relate to allotment separations an station separations. Petitions t amend the Table of Allotment (§ 73.606(b)) (other than those also expressly requesting amendment of thi section or § 73.609) will be dismisse and all applications for new TV broadcast stations or for changes in th transmitter sites of existing station will not be accepted for filing if the fail to comply with the requirement specified in paragraphs (b), (c) and (d of this section.

NOTE: Licensees and permittees of telev sion broadcast stations which were opera ing on April 14, 1952 pursuant to one o more separations below those set forth i § 73.610 may continue to so operate, but i no event may they further reduce the separations below the minimum. As the existin separations of such stations are increased the new separations will become the required minimum separations until separ tions are reached which comply with the requirements of § 73.610. Thereafter, the provisions of said section shall be applicable.

(b) Minimum co-channel allotmen and station separations:

(1)

Zone	Kilometers	
	Channels 2-13	Channels 14-6
I	272.7 (169.5 miles)	248.6 (154.5 mi
II	304.9 (189.5 miles)	280.8 (174.5 mi
III	353.2 (219.5 miles)	329.0 (204.5 mi

(2) The minimum co-channel distance separation between a station in one zone and a station in another zone shall be that of the zone requiring the lower separation.

(c) Minimum allotment and station adjacent channel separations applicable to all zones:

(1) Channels 2-13 95.7 kilometers (59.5 miles). Channels 14-69 87.7 kilometers (54.5 miles).

(2) Due to the frequency spacing which exists between Channels 4 and 5, between Channels 6 and 7, and between Channels 13 and 14, the minimum adjacent channel separations specified above shall not be applicable to these pairs of channels (see § 73.603(a)).

(d) In addition to the requirements of paragraphs (a), (b) and (c) of this section, the minimum assignment and station separations between stations on Channels 14-69, inclusive, as set forth in Table II of § 73.698 must be met in either rule-making proceedings looking towards the amendment of the Table of Assignments (§ 73.606(b)) or in licensing proceedings. No channel listed in column (1) of Table II of § 73.698 will be assigned to any city, and no application for an authorization to operate on such a channel will be granted, unless the distance separations indicated at the top of columns (2) through (7), inclusive, are met with respect to each of the channels listed in those columns and parallel with the channel in column (1).

(e) The zone in which the transmitter of a television station is located or proposed to be located determines the applicable rules with respect to co-channel distance separations where the transmitter is located in a different zone from that in which the channel to be employed is located.

(f) The distances listed below apply only to allotments and assignments on Channel 6 (82-88 MHz). The Commission will not accept petitions to amend the Table of Allotments, applications for new stations, or applications to change the channel or location of existing assignments where the following minimum distances (between transmitter sites, in kilometers) from any FM Channel 253 allotment or assignment are not met:

MINIMUM DISTANCE SEPARATION FROM FM CHANNEL 253 (98.5 MHz)

Fm Class	TV Zone I	TV Zones II & III
A	17	22
B1	19	23
B	22	26
C3	19	23
C2	22	26
C1	29	33
C	36	41

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[28 FR 13660, Dec. 14, 1963, as amended at 37 FR 25842, Dec. 5, 1972; 44 FR 65765, Nov. 15, 1979; 47 FR 35990, Aug. 18, 1982; 50 FR 23698, June 5, 1985; 51 FR 44070, Dec. 8, 1986; 54 FR 14964, Apr. 14, 1989; 54 FR 16368, Apr. 24, 1989; 54 FR 35340, Aug. 25, 1989]

§ 73.611 Reference points and distance computations.

(a) In considering petitions to amend the Table of Allotments (§ 73.606(b)), the following reference points shall be used by the Commission in determining assignment separations between communities:

(1) Where transmitter sites for the pertinent channels have been authorized in communities involved in a petition to amend the Table of Allotments, separations between such communities shall be determined by the distance between the coordinates of the authorized transmitter sites in the respective communities as set forth in the Commission's authorizations therefor.

(2) Where an authorized transmitter site is available for use as a reference point in one community but not in the other for the pertinent channels, separations shall be determined by the distance between the coordinates of the transmitter site as set forth in the FCC's authorization therefor and the coordinates of the other community as set forth in the publication of the United States Department of the Interior entitled, Index to *The National Atlas of the United States of America.* If this publication does not contain the coordinates for said other community, the coordinates of the main post office thereof shall be used.

(3) Where no authorized transmitter sites are available for use as reference points in both communities for the pertinent channels, the distance be-

tween the two communities listed in the above publication shall be used. If said publication does not contain such distance, the separation between the two communities shall be determined by the distance between the coordinates thereof as set forth in the publication. Where such coordinates are not contained in the publication, the coordinates of the main post offices of said communities shall be used.

(4) Where the distance between the reference point in a community to which a channel is proposed to be assigned and the reference point in another community or communities does not meet the minimum separation requirements of § 73.610, the channel may be assigned to such community upon a showing that a transmitter site is available that would meet the minimum separation requirements of § 73.610 and the minimum field strength requirements of § 73.685. In such cases, where a station is not authorized in the community or communities to which measurements from the proposed channel assignment must be made pursuant to § 73.610 a showing should also be made that the distance between suitable transmitter sites in such other community or communities and the proposed transmitter site for the new channel meet the Commission's minimum spacing and coverage requirements.

(b) Station separations in licensing proceedings shall be determined by the distance between the coordinates of the proposed transmitter site in one community and

(1) The coordinates of an authorized transmitter site for the pertinent channel in the other community; or, where such transmitter site is not available for use as a reference point,

(2) The coordinates of the other community as set forth in the Index to *The National Atlas of the United States of America;* or if not contained therein,

(3) The coordinates of the main post office of such other community.

(4) In addition, where there are pending applications in other communities which, if granted, would have to be considered in determining station separations, the coordinates of the transmitter sites proposed in such ap-
plications must be used to determi
whether the requirements with
spect to minimum separations betwe
the proposed stations in the respecti
cities have been met.

(c) In measuring assignment and s
tion separations involving cities lis
in the Table in combination, whe
there is no authorized transmitter
in any of the combination cities on t
channel involved, separation measu
ments shall be made from the refe
ence point which will result in t
lowest separation.

(d) To calculate the distance b
tween two reference points see par
graph (c), § 73.208. However, distanc
shall be rounded to the nearest ten
of a kilometer.

[52 FR 11655, Apr. 10, 1987]

§ 73.612 Protection from interference.

(a) Permittees and licensees of T
broadcast stations are not protect
from any interference which may
caused by the grant of a new static
or of authority to modify the faciliti
of an existing station in accordan
with the provisions of this subpa
The nature and extent of the prote
tion from interference accorded to T
broadcast stations is limited solely
the protection which results from t
minimum allotment and station sep
ration requirements and the rules a
regulations with respect to maximu
powers and antenna heights set for
in this subpart.

(b) When the Commission dete
mines that grant of an applicati
would serve the public interest, co
venience, and necessity and the instr
ment of authorization specifies an a
tenna location in a designated antenn
farm area which results in distan
separation less than those specified
this subpart, TV broadcast station pe
mittees and licensees shall be afford
protection from interference equiv
lent to the protection afforded und
the minimum distance separatio
specified in this subpart.

NOTE: The nature and extent of the p
tection from interference accorded to T
broadcast stations which were authori
prior to April 14, 1952, and which were op
ating on said date is limited not only
specified above but is further limited by a

smaller separations existing between such stations on said date. Where, as a result of the adoption of the Table of Allotments or of changes in transmitter sites made by such stations after said date, separations smaller than the required minimum are increased but still remain lower than the required minimum, protection accorded such stations will be limited to the new separations.

[28 FR 13660, Dec. 14, 1963, as amended at 32 FR 8814, June 21, 1967; 50 FR 23698, June 5, 1985; 51 FR 44070, Dec. 8, 1986]

§ 73.614 Power and antenna height requirements.

(a) *Minimum requirements.* Applications will not be accepted for filing if they specify less than −10 dBk (100 watts) horizontally polarized visual effective radiated power in any horizontal direction. No minimum antenna height above average terrain is specified.

(b) *Maximum power.* Applications will not be accepted for filing if they specify a power which exceeds the maximum permitted boundaries specified in the following formulas:

(1) Channels 2–6 in Zone I:

$ERP_{Max}=102.54-33.33^{*}\ Log_{10}\ (HAAT)$

And,

$-10\ dBk < ERP_{Max} < 20\ dBk$

(2) Channels 2–6 in Zones II and III:

$ERP_{Max}=67.57-17.08^{*}\ Log_{10}\ (HAAT)$

And,

$10\ dBk < ERP_{Max} < 20\ dBk$

(3) Channels 7–13 in Zone I:

$ERP_{Max}=107.57-33.24^{*}\ Log_{10}\ (HAAT)$

And,

$-4.0\ dBk < ERP_{Max} < 25\ dBk$

(4) Channels 7–13 in Zones II and III:

$ERP_{Max}=72.57-17.08^{*}\ Log_{10}\ (HAAT)$

And,

$15\ dBk < ERP_{Max} < 25\ dBk$

(5) Channels 14–69 in Zones I, II, and III:

$ERP_{Max}=84.57-17.08^{*}\ Log_{10}\ (HAAT)$

And,

$27\ dBk < ERP_{Max} < 37\ dBk$

Where:

ERP_{Max} = Maximum Effective Radiated Power measured in decibels above 1 kW (dBk).

HAAT = Height Above Average Terrain measured in meters.

The boundaries specified are to be used to determine the maximum possible combination of antenna height and ERP_{dBk}. When specifying an ERP_{dBk} less than that permitted by the lower boundary, any antenna HAAT can be used. Also, for values of antenna HAAT greater than 2,300 meters the maximum ERP is the lower limit specified for each equation.

(6) The effective radiated power in any horizontal or vertical direction may not exceed the maximum values permitted by this section.

(7) The effective radiated power at any angle above the horizontal shall be as low as the state of the art permits, and in the same vertical plane may not exceed the effective radiated power in either the horizontal direction or below the horizontal, whichever is greater.

(c) *Determination of applicable rules.* The zone in which the transmitter of a television station is located or proposed to be located determines the applicable rules with respect to maximum antenna heights and powers for VHF stations when the transmitter is located in Zone I and the channel to be employed is located in Zone II, or the transmitter is located in Zone II and the channel to be employed is located in Zone I.

[28 FR 13660, Dec. 14, 1963, as amended at 42 FR 20823, Apr. 22, 1977; 42 FR 48881, Sept. 26, 1977; 47 FR 35990, Aug. 18, 1982; 50 FR 23698, June 5, 1985]

§ 73.615 Administrative changes in authorizations.

In the issuance of television broadcast station authorizations, the Commission will specify the transmitter output power and effective radiated power to the nearest 0.1 dBk. Power specified by kWs shall be obtained by converting dBk to kWs to 3 significant figures. Antenna heights above average terrain will be specified to the nearest meter. Midway figures will be authorized in the lower alternative.

[50 FR 23698, June 5, 1985]

§ 73.621 Noncommercial educational TV stations.

In addition to the other provisions of this subpart, the following shall be applicable to noncommercial educational television broadcast stations:

(a) Except as provided in paragraph (b) of this section, noncommercial educational broadcast stations will be licensed only to nonprofit educational organizations upon a showing that the proposed stations will be used primarily to serve the educational needs of the community; for the advancement of educational programs; and to furnish a nonprofit and noncommercial television broadcast service.

(1) In determining the eligibility of publicly supported educational organizations, the accreditation of their respective state departments of education shall be taken into consideration.

(2) In determining the eligibility of privately controlled educational organizations, the accreditation of state departments of education or recognized regional and national educational accrediting organizations shall be taken into consideration.

(b) Where a municipality or other political subdivision has no independently constituted educational organization such as, for example, a board of education having autonomy with respect to carrying out the municipality's educational program, such municipality shall be eligible for a noncommercial educational television broadcast station. In such circumstances, a full and detailed showing must be made that a grant of the application will be consistent with the intent and purpose of the Commission's rules and regulations relating to such stations.

(c) Noncommercial educational television broadcast stations may transmit educational, cultural and entertainment programs, and programs designed for use by schools and school systems in connection with regular school courses, as well as routine and administrative material pertaining thereto.

(d) A noncommercial educational television station may broadcast programs produced by or at the expense of, or furnished by persons other than the licensee, if no other consideration than the furnishing of the program and the costs incidental to its production and broadcast are received by the licensee. The payment of line charges by another station, network, or someone other than the licensee of a noncommercial educational television station, or general contributions to the operating costs of a station, shall not be considered as being prohibited by this paragraph.

(e) Each station shall furnish a nonprofit and noncommercial broadcast service. Noncommercial educational television stations shall be subject to the provisions of § 73.1212 to the extent that they are applicable to the broadcast of programs produced by, or at the expense of, or furnished by others. No *promotional* announcements *on behalf of for profit entities* shall be broadcast at any time in exchange for the receipt, in whole or in part, of consideration to the licensee, its principals, or employees. However, acknowledgements of contributions can be made. *The scheduling of any announcements and acknowledgements may not interrupt regular programming.*

NOTE: Commission interpretation of this rule, including the acceptable form of acknowledgements, may be found in the Second Report and Order in Docket No. 21136 (Commission Policy Concerning the Noncommercial Nature of Educational Broadcast Stations), 86 F.C.C. 2d 141 (1981); the Memorandum Opinion and Order in Docket No. 21136, 90 FCC 2d 895 (1982), and the Memorandum Opinion and Order in Docket 21136, 49 FR 13534, April 5, 1984.

(f) Telecommunications Service on the Vertical Blanking Interval. The provisions governing VBI telecommunications service in § 73.646 are applicable to noncommercial educational TV stations.

(g) Non-program related data signals transmitted on Line 21 pursuant to § 73.682(a)(22)(ii) may be used for remunerative purposes.

[28 FR 13660, Dec. 14, 1963, as amended at 35 FR 7558, May 15, 1970; 47 FR 36179, Aug. 19, 1982; 48 FR 27068, June 13, 1983; 49 FR 29069, July 18, 1984; 50 FR 4664, Feb. 1, 1985; 50 FR 4684, Feb. 1, 1985]

§ 73.635 Use of common antenna site.

No television license or renewal of a television license will be granted to any person who owns, leases, or controls a particular site which is peculiarly suitable for television broadcasting in a particular area and (a) which is not available for use by other television licensees; and (b) no other comparable site is available in the area; and (c) where the exclusive use of such site by the applicant or licensee would unduly limit the number of television stations that can be authorized in a particular area or would unduly restrict competition among television stations.

[28 FR 13660, Dec. 14, 1963]

§ 73.641 Subscription TV definitions.

(a) *Subscription television.* A system whereby subscription television programs are transmitted and received.

(b) *Subscription television program.* A television boadcast program intended to be received in intelligible form for a fee or charge.

[52 FR 6154, Mar. 2, 1987]

§ 73.642 Subscription TV service.

(a) Subscription TV service may be provided by:

(1) Licensees and permittees of commercial TV stations, and

(2) Licensees and permittees of low power TV stations.

(b) A licensee or permittee of a commercial TV station or a low power TV station may begin subscription TV service upon installation of encoding equipment having advance FCC approval. However, the licensee or permittee of a TV broadcast station (not applicable to low power TV stations) must send a letter to the FCC in Washington, DC, that subscription TV service will commence at least 30 days prior to commencement of such service. In that letter, to be entitled "Notice of Commencement of STV Operations," the licensee or permittee is to state that it will comply with the provisions of paragraphs (e)(1) through (e)(3) and § 73.644(c) of this chapter and identify the make and type of encoding system to be used. A similar notice must be submitted if the licensee or permittee commences using another type of encoding system. (See section 644(h).) A notice must also be submitted to the FCC in Washington, DC, if encoded subscription TV service is to be discontinued, at least 30 days prior to such discontinuance.

(c) The station proof of system compliance measurement data (see § 73.644(c)) need not be submitted to the FCC, however, the measurement data must be available to the FCC upon request.

(d) The use of the visual vertical blanking interval or an aural subcarrier for transmitting subscriber decoder control code signals during periods of normal non-encoded programming may be used only upon specific FCC authorization. Letter requests to use either the video blanking intervals or aural subcarriers during periods of non-subscription programming are to be sent to the FCC in Washington, D.C.

(e) A licensee or permittee of a commercial TV broadcast or low power TV station may not transmit a subscription service if it has a contract, arrangement, or understanding, expressed or implied, that:

(1) Prevents or hinders it from rejecting or refusing any subscription TV broadcast program that it reasonably believes to be unsatisfactory or unsuitable or contrary to the public interests; or substituting a subscription or conventional program that, in its opinion, is of greater local or national importance; or

(2) Delegates to any other person the right to schedule the hours of transmission of subscription programs. However, this rule does not prevent a licensee or permittee from entering into an agreement or arrangement whereby it agrees to schedule a specific subscription TV broadcast program at a specific time or to schedule a specific number of hours of subscription programs during the broadcast day (or segments thereof) or weeks; or

(3) Deprives it of the right of ultimate decision concerning the maximum amount of any subscription program charge or fee.

(4) Has provisions that do not comply with the following policies of the FCC:

(i) Unless a satifactory signal is unavailable at the location where service is desired, subscription TV service must be provided to all persons desiring it within the Grade A contour of the station broadcasting subscription programs. Geographic or other reasonable patterns of installation for new subscription services is permitted and, for good cause, service may be terminated.

(ii) Charges, terms and conditions of service to subscribers must be applied uniformly. However, subscribers may be divided into reasonable classifications approved by the FCC, and the impositions of different sets of terms and conditions may be applied to subscribers in different classifications. Further, for good cause, within such classification, deposits may be required from some subscribers and not of others; and, also for good cause, if a subscription system generally uses a credit-type decoder, cash operated decoders may be installed for some subscribers.

[48 FR 56392, Dec. 21, 1983, as amended at 52 FR 6154, Mar. 2, 1987]

§ 73.643 Subscription TV operating requirements.

The non-technical rules and policies applicable to regular TV broadcast stations are applicable to subscription TV operations, except where specifically exempted in the provisions of those rules and policies.

[48 FR 56392, Dec. 21, 1983]

§ 73.644 Subscription TV transmission systems.

(a) Licensees and permittees of commercial TV broadcast and low power TV stations may conduct subscription operations only by using an encoding system that has been approved in advance by the FCC. Such advance approval may be applied for and granted in accordance with the procedures given in Subpart M Part 2 of the Rules.

(b) The criteria for advance approval of subscription TV transmitting systems by the FCC are as follows:

(1) Spectral energy in the transmitted signal must not exceed the limitations given in § 73.687(i).

(2) No increase in width of the television broadcast channel (6 MHz.) is permitted.

(3) The technical system must enable stations to transmit encoded subscription TV programs without increasing the RMS output power from either the video or audio transmitters over that required to transmit the same program material using normal transmission standards.

(4) Modification of a type accepted TV broadcast or low power TV transmitter for encoded transmissions must not render transmitter incapable of operating in accordance with the operating specifications upon which type acceptance was granted. (See § 2.1001 (b), (k))

(5) Interference to reception of conventional television either of co-channel or adjacent channel stations must not increase over that resulting from the transmission of programming with normal transmission standards.

(6) Subscriber decoder devices must meet the provisions, where required, of Subpart H of Part 15 of the FCC Rules for TV Interface Devices.

(c) Prior to commencing the transmission of encoded subscription programming, the licensee or permittee of a TV broadcast or low power TV station must perform such tests and measurements to determine that the transmitted encoded signal conforms to the radiated radio frequency and demodulated baseband and waveforms, transmitter operating power determination, and the occupied bandwidth limitations specified in the application for advance FCC approval of the system being used. A copy of the measurement data is to be maintained in the station files and made available to the FCC upon request.

(d) The licensee of a station transmitting an encoded subscription service must have at the transmitter control point the technical specifications for the system being used of both the aural and visual baseband signals and the transmitted radiofrequency signals, and have the necessary measuring and monitoring equipment, including transmitter output power measuring equipment, to determine that the transmissions conform to the advance approval specifications on file with the

FCC. Full operating specifications for the system must be available to representatives of the FCC upon request.

(e) The operating power of the transmitters during encoded operations must be determined and maintained according to the procedures given in the application for advance approval.

(f) A station using an encoding system in accordance with the specifications filed with the application for advance approval is deemed to be exempted from those technical regulations of this Subpart and Subpart H to the extent they are specifically detailed in the application.

(g) No protection from interference of any kind will be afforded to reception of encoded subscription programming over that afforded reception of non-encoded signals.

(h) A licensee or permittee may make no modifications on a subscription encoding system that would alter the characteristics of the transmitted aural or visual signal from those specified in the application for advance approval. A licensee or permittee of a station replacing its encoding system must perform the measurements required by paragraph (c) of this section. A TV broadcast station licensee or permittee must also send a letter advising the FCC of the new system being used as required by § 73.642(b) of this chapter.

(i) The station licensee is fully responsible for all technical operations of the station during transmissions of encoded subscription programming, regardless of the supplier of the encoding equipment or subscription program service.

NOTE: Stations transmitting encoded subscription programming prior to October 1, 1983, must comply with all technical and operating requirements of this Section no later than April 1, 1984. Stations not having the information to comply with this Section must obtain such information from the manufacturer of the encoding system being used, and if necessary, by measurements of the station's transmission system.

(j) Upon request by an authorized representative of the FCC, the licensee of a TV station transmitting encoded programming must make available a receiving decoder to the Commission to carry out its regulatory responsibilities.

[48 FR 56392, Dec. 21, 1983]

§ 73.646 Telecommunications Service on the Vertical Blanking Interval.

(a) Telecommunications services permitted on the vertical blanking interval (VBI) service include the transmission of data, processed information, or any other communication in either a digital or analog mode.

(b) Telecommunications service on the VBI is of an ancillary nature and as such is an elective, subsidiary activity. No service guidelines, limitations, or performance standards are applied to it. The kinds of service that may be provided include, but are not limited to, teletext, paging, computer software and bulk data distribution, and aural messages. Such services may be provided on a broadcast, point-to-point, or point to multipoint basis.

(c) Telecommunications services that are common carrier in nature are subject to common carrier regulation. Licensees operating such services are required to apply to the Commission for the appropriate authorization and to comply with all policies and rules applicable to the particular service.

(d) Television licensees are authorized to lease their VBI telecommunications facilities to outside parties. In all arrangements entered into with outside parties affecting telecommunications service operation, the licensee or permittee must retain control over all material transmitted in a broadcast mode via the station's facilities, with the right to reject any material that it deems inappropriate or undesirable. The licensee or permittee is also responsible for all aspects of technical operation involving VBI telecommunications services.

(e) The grant or renewal of a TV station license or permit will not be furthered or promoted by proposed or past VBI telecommunications service operation; the licensee must establish that its broadcast operation serves the public interest wholly apart from VBI telecommunications service activities. (Violation of rules applicable to VBI telecommunications services could, of

best copy available

course, reflect on a licensee's qualifications to hold its license or permit.)

(f) TV broadcast stations are authorized to transmit VBI telecommunications service signals during any time period, including portions of the day when normal programming is not broadcast. Such transmissions must be in accordance with the technical provisions of § 73.682.

[50 FR 4663, Feb. 1, 1985; 50 FR 9035, Mar. 6, 1985]

§ 73.653 Operation of TV aural and visual transmitters.

The aural and visual transmitters may be operated independently of each other or, if operated simultaneously, may be used with different and unrelated program material.

[54 FR 9806, Mar. 8, 1989]

§ 73.658 Affiliation agreements and network program practices; territorial exclusivity in non-network program arrangements.

(a) *Exclusive affiliation of station.* No license shall be granted to a television broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization under which the station is prevented or hindered from, or penalized for, broadcasting the programs of any other network organization. (The term "network organization" as used in this section includes national and regional network organizations. See ch. VII, J, of Report on Chain Broadcasting.)

(b) *Territorial exclusively.* No license shall be granted to a television broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which prevents or hinders another broadcast station located in the same community from broadcasting the network's programs not taken by the former station, or which prevents or hinders another broadcast station located in a different community from broadcasting any program of the network organization. This section shall not be construed to prohibit any contract, arrangement, or understanding between a station and a network organization pursuant to which the station is granted the first call in its community upon the programs of the network organization. As employed in this paragraph, the term "community" is defined as the community specified in the instrument of authorization as the location of the station.

(c) [Reserved]

(d) *Station commitment of broadcast time.* No license shall be granted to a television broadcast station having any contract, arrangement, or understanding, express or implied, with any network organization, which provides for optioning of the station's time to the network organization, or which has the same restraining effect as time optioning. As used in this section, time optioning is any contract, arrangement, or understanding, express or implied, between a station and a network organization which prevents or hinders the station from scheduling programs before the network agrees to utilize the time during which such programs are scheduled, or which requires the station to clear time already scheduled when the network organization seeks to utilize the time.

(e) *Right to reject programs.* No license shall be granted to a television broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which, with respect to programs offered or already contracted for pursuant to an affiliation contract, prevents or hinders the station from:

(1) Rejecting or refusing network programs which the station reasonably believes to be unsatisfactory or unsuitable or contrary to the public interest, or

(2) Substituting a program which, in the station's opinion, is of greater local or national importance.

(f) *Network ownership of stations.* No license shall be granted to a network organization, or to any person directly or indirectly controlled by or under common control of a network organization for a television broadcast station in any locality where the existing television broadcast stations are so few or of such unequal desirability (in terms of coverage, power, frequency, or other related matters) that competition would be substantially restrained by such licensing. (The work "control" as used in this section, is not limited to full control but includes such a measure of control as would substantially affect the availability of the station to other networks.)

(g) *Dual network operation.* No license shall be issued to a television broadcast station affiliated with a network organization which maintains more than one network of television broadcast stations: *Provided,* That this section shall not be applicable if such networks are not operated simultaneously, or if there is no substantial overlap in the territory served by the group of stations comprising each such network.

(h) *Control by networks of station rates.* No license shall be granted to a television broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization under which the station is prevented or hindered from, or penalized for, fixing or altering its rates for the sale of broadcast time for other than the network's programs.

(i) No license shall be granted to a television broadcast station which is represented for the sale of non-network time by a network organization or by an organization directly or indirectly controlled by or under common control with a network organization, if the station has any contract, arrangement or understanding, express or implied, which provides for the affiliation of the station with such network organization: *Provided, however,* That this rule shall not be applicable to stations licensed to a network organization or to a subsidiary of a network organization.

(j) *Network syndication and program practices.* (1) Except as provided in paragraph (j)(3) of this section, no television network shall:

(i) After June 1, 1973, sell, license, or distribute television programs to television station licensees within the United States for non-network television exhibition or otherwise engage in the business commonly known as "syndication" within the United States; or sell, license, or distribute television programs of which it is not the sole producer for exhibition outside the United States; or reserve any option or right to share in revenues or profits in connection with such domestic and/or foreign sale, license, or distribution; or

(ii) After August 1, 1972, acquire any financial or proprietary right or interest in the exhibition, distribution, or other commercial use of any television program produced wholly or in part by a person other than such television network, except the license or other exclusive right to network exhibition within the United States and on foreign stations regularly included within such television network: *Provided,* That if such network does not timely avail itself of such license or other exclusive right to network exhibition within the United States, the grantor of such license or right to network exhibition may, upon making a timely offer reasonably to compensate the network, reacquire such license or other exclusive right to exhibition of the program.

(2) Nothing contained in paragraphs (j) (1) and (2) of this section shall prevent any television network from selling or distributing programs of which it is the sole producer for television exhibition outside the United States, or from selling or otherwise disposing of any program rights not acquired from another person, including the right to distribute programs for non-network exhibition (as in syndication) within the United States as long as it does not itself engage in such distribution within the United States or retain the right to share the revenues or profits therefrom.

(3) Nothing contained in this paragraph shall be construed to include any television network formed for the purpose of producing, distributing, or syndicating program materials for educational, noncommercial, or public broadcasting exhibition or uses.

(4) For the purposes of this paragraph and paragraph (k) of this section the term network means any person, entity, or corporation which offers an interconnected program service on a regular basis for 15 or more hours per week to at least 25 affiliated television licensees in 10 or more States; and/or any person, entity, or corporation controlling, controlled by, or under common control with such person, entity, or corporation.

(k) Effective September 8, 1975, commercial television stations owned by or affiliated with a national television network in the 50 largest television markets (see Note 1 to this paragraph) shall devote, during the four hours of prime time (7-11 p.m. e.t. and p.t., 6-10 p.m. c.t. and m.t.), no more than three hours to the presentation of programs from a national network, programs formerly on a national network (off-network programs) other than feature films, or, on Saturdays, feature films: *Provided, However,* That the following categories of programs need not be counted toward the three-hour limitation:

(1) On nights other than Saturdays, network or off-network programs designed for children, public affairs programs or documentary programs (see Note 2 to this paragraph for definitions).

(2) Special news programs dealing with fast-breaking news events, on-the-spot coverage of news events or other material related to such coverage, and political broadcasts by or on behalf of legally qualified candidates for public office.

(3) Regular network news broadcasts up to a half hour, when immediately adjacent to a full hour of continuous locally produced news or locally produced public affairs programing.

(4) Runovers of live network broadcasts of sporting events, where the event has been reasonably scheduled to conclude before prime time or occupy only a certain amount of prime time, but the event has gone beyond its expected duration due to circumstances not reasonably foreseeable by the networks or under their control. This exemption does not apply to post-game material.

(5) In the case of stations in the Mountain and Pacific time zones, on evenings when network prime-time programing consists of a sports event or other program broadcast live and simultaneously throughout the contiguous 48 states, such stations may assume that the network's schedule that evening occupies no more of prime time in these time zones than it does in the Eastern and Central time zones.

(6) Network broadcasts of an international sports event (such as the Olympic Games), New Year's Day college football games, or any other network programing of a special nature other than motion pictures or other sports events, when the network devotes all of its time on the same evening to the same programing, except brief incidental fill material.

NOTE 1: The top 50 markets to which this paragraph applies are the 50 largest markets in terms of average prime time audience for all stations in the market. For broadcast years before fall 1980, the 50 markets are the largest 50 as listed in the Arbitron publication "Television Markets and Rankings Guide," generally published in November, which will apply for the broadcast year starting the following fall, except that, for 1978-79, "Syracuse-Elmira" will not be included and the Salt Lake City market will be included. For broadcast years starting in the fall of 1980 and thereafter, the 50 largest markets to which this paragraph applies will be determined at 3-year intervals, on the basis of the average of two Arbitron February-March audience surveys occuring roughly 2½ years and roughly 3½ years before the start of the 3-year period. The 50 markets to which this paragraph will apply for 3 years from fall 1980 to fall 1983 will be determined by an average of the prime time audience figures (all market stations combined) contained in the reports of Arbitron February/March 1977 and February/March 1978 audience surveys. Shortly after the results of the 1978 survey are available the Commission will issue a list of the 50 largest markets to which this paragraph will apply from fall 1980 to fall 1983. The same procedure will take place, on the basis of February/March 1980 and 1981 surveys, for the 3-year period from fall 1983 to fall 1986.

NOTE 2: As used in this paragraph, the term "programs designed for children" means programs primarily designed for children aged 2 through 12. The term "documentary programs" means programs which are nonfictional and educational or informational, but not including programs where the information is used as part of a contest among participants in the program, and not including programs relating to the visual entertainment arts (stage, motion pictures or television) where more than 50% of the program is devoted to the presentation of entertainment material itself. The term "public affairs programs" means talks, commentaries, discussions, speeches, editorials, political programs, documentaries, forums, panels, roundtables, and similar programs primarily concerning local, national, and international public affairs.

(l) *Broadcast of the programs of more than one network.* The provisions of this paragraph govern and limit the extent to which, after October 1, 1971, commercial television stations in the 50 States of the United States, which are regular affiliates of one of the three national television networks, may broadcast programs of another network, in markets where there are two such affiliated stations and one or more operational VHF or UHF stations having reasonably comparable facilities which are not regular affiliates of any network. Whether or not the stations in a particular market come within the provisions of this paragraph is determined by whether, as of July 1 of each year with respect to programs beginning October 1, or as of January 1 of each year with respect to programs beginning April 1, there are in the market the stations specified in the last sentence.

(1) *Definitions.* As used in this paragraph, the following terms have the meanings given:

(i) "Station" means a commercial television station in the 50 States of the United States.

(ii) "Operational station" means a station authorized and operating as of June 10 (with respect to programs beginning October 1) or as of December 10 (with respect to programs beginning April 1), or a station authorized and which gives notice to the Commission by such June 10 or December 10 date that it will be on the air by such October 1 or April 1 date (including request for program test authority if none has previously been given), and commits itself to remain on the air for 6 months after such October 1 or April 1 date. Such notice shall be received at the Commission by the June 10 or December 10 date mentioned, and shall show that copies thereof have been sent to the three national networks and to the licensees of all operating television stations in the market.

(iii) "Affiliated station" means a station having a regular affiliation with one of the three national television networks, under which it serves as that network's primary outlet for the presentation of its programs in a market. It includes any arrangement under which the network looks primarily to this station rather than other stations for the presentation of its programs and the station chiefly presents the programs of this network rather than another network.

(iv) "Unaffiliated station" means a station not having an affiliation arrangement as defined in this subparagraph with a national television network, even though it may have other types of agreements or per-program arrangements with it.

(v) "Network" means a national organization distributing programs for a substantial part of each broadcast day to television stations in all parts of the United States, generally via interconnection facilities.

(vi) "Unaffiliated network" means a network not having an affiliated station (as defined in this paragraph) in a particular market, even though it may have other types of agreements or per-program arrangements.

(vii) "Market" means the television markets of the United States, and the stations in them, as identified in the latest publication of American Research Bureau (ARB), together with any stations which have since become operational in the same communities.

(viii) "Evening programing" means programing (regular programs or "specials") starting and concluding on a network between the hours of 7:30 p.m. and 11 p.m. local time (except 6:30 p.m. and 10 p.m. in the Central time zone), plus all programs other than regular newscasts starting on the network between 7 and 7:30 p.m. local time (6 and 6:30 p.m. local time in the Central time zone). It does not include portions broadcast after 7 p.m. of programs starting earlier, or portions broadcast after 11 p.m. of programs starting earlier.

(ix) "Specials" means programs not carried on the network at least as often as once a week. It includes both programs scheduled well in advance and those scheduled very shortly before broadcast on the network.

(x) "Reasonably comparable facilities" means station transmitting facilities (effective radiated power and effective antenna height above average terrain) such that the station Grade B coverage area is at least two-thirds as large (in square kilometers) as the smallest of the market affiliated stations' Grade B coverage areas. Where one or both of the affiliates is licensed to a city different from that of the unaffiliated station, the term "reasonably comparable facilities" also includes the requirement that the unaffiliated station must put a predicted Grade A or better signal over all of the city of license of the other regular (nonsatellite) station(s), except that where one of the affiliated stations is licensed to the same city as the unaffiliated station, and puts a Grade B but not a Grade A signal over the other city of license, the unaffiliated station will be considered as having reasonably comparable facilities if it too puts a predicted Grade B signal over all of the other city of license.

(2) *Taking programs from unaffiliated networks.* No affiliated station, in a market covered by this paragraph, shall take and broadcast, from an unaffiliated network, any programing of the times and types specified in this subparagraph, unless the conditions specified have first been met:

(i) Any evening programing (as defined in this paragraph), unless and until the entire schedule of such programs has been offered by the unaffiliated network to the unaffiliated station as provided in paragraph (1)(4) of this section, and the unaffiliated station has either accepted 15 hours per week of such programs, plus additional "special" hours when part of the "special" is included in the 15 hours, or has accepted a lesser amount and indicated that it does not wish to carry any more. Such acceptance shall be governed by the provisions of paragraph (1)(4) of this section.

(ii) Any programing beginning on the network between 12 noon and 7 p.m. on Saturdays, Sundays, and holidays, and consisting of sports events (including, without limitation, college football and basketball, professional football, baseball, ice hockey, golf, tennis, horseracing and autoracing), unless and until the program has first been offered to the unaffiliated station and that station has indicated that it does not wish to accept it.

(iii) Any programing broadcast after 11 p.m. local time (except 10 p.m. local time in the Central time zone) which is a continuation of programs starting earlier and carried by the unaffiliated station; or any material broadcast after 7 p.m. (6 p.m. in the Central time zone) which is a continuation of sports programs beginning earlier and carried by the unaffiliated station.

(iv) Any program presented in the same week by the unaffiliated station.

(3) *Carriage of programs of a network which has an affiliate.* No affiliated station in a market covered by this paragraph shall broadcast, from another network which has an affiliated station in the market, any evening programing or Saturday, Sunday, or holiday sports programing unless such programing has first been offered to the unaffiliated station in the market and the latter has indicated that it does not wish to carry it.

(4) *Offer and acceptance.* (i) The "offer" by a network referred to in this paragraph means an offer to the unaffiliated station of the program for broadcast. Programs so offered cannot be withdrawn by the network until the following April 1 or October 1, unless the station does not in fact broadcast the program as accepted, in which case the provisions of paragraph (1)(4)(ii) of this section shall apply, or unless the program is canceled on the network, in which case the replacement or substitute program shall be offered to the station as a new program under paragraphs (1)(2) or (of this section. If a program accepted by the unaffiliated station is shifted in time, the station may exercise its right of "first call" either with respect to the program at its new time, or the previous time segment, at its option.

(ii) The acceptance referred to in paragraphs (1) (2) and (3) of this section means that the unaffiliated station agrees to broadcast the program accepted, at its live network time or delayed time acceptable to the network, unless in its judgment the program is not in the public interest or wishes to substitute a local, or other live, program for it. The provisions of paragraph (a) of this section, prohibiting agreements which hinder the presentation of the programs of other ne works, shall not apply to material covered by this paragraph. If a program is not presented in a particular week live or at a delayed time acceptable to the network, the network may place this particular broadcast of the program on another station; and if this occurs more than 4 times in any 13-week period the network may withdraw the program from the station without obligation to offer it any additional programing. The unaffiliated station is free to seek and obtain other terms of acceptance from the network; but the offer of programing by the network on the foregoing terms satisfies its obligations under this paragraph.

(iii) The offer by the network shall, to the extent possible, be up to and including August 2, 1971 with respect to programs beginning in the fall season, and by January 15 with respect to programs presented after April 1, or otherwise as soon as possible. The unaffiliated station's acceptance or indication of nonacceptance shall be within 2 weeks after the date of the offer; where any negotiations between the network and the station concerning particular programs are involved, programs not accepted within 30 days of the date of the offer shall be deemed not accepted.

NOTE 1: If there are in a particular market two affiliated stations and two (or more) operational unaffiliated stations with reasonably comparable facilities, the provisions of this paragraph (l) shall require an offer of programing to each; but the 15-hour-per-week "first call" provision applies to the total programing taken by all such stations.

NOTE 2: The provisions of this paragraph (l) do not apply to a market in which there are two VHF affiliated U.S. stations, and a foreign VHF station to which a national U.S. television network transmits programs pursuant to authority granted under section 325 of the Communications Act of 1934, as amended, and which serves as that network's primary affiliate in the market.

(m) *Territorial exclusivity in non-network arrangements.* (1) No television station shall enter into any contract, arrangement, or understanding, expressed or implied; with a non-network program producer, distributor, or supplier, or other person; which prevents or hinders another television station located in a community over 56.3 kilometers (35 miles) away, as determined by the reference points contained in § 76.53 of this chapter, (if reference points for a community are not listed in § 76.53, the location of the main post office will be used) from broadcasting any program purchased by the former station from such non-network program producer, distributor, supplier, or other person, except that a television station may secure exclusivity against a television station licensed to another designated community in a hyphenated market specified in the market listing as contained in § 76.51 of this chapter for those 100 markets listed, and for markets not listed in § 76.51 of this chapter, the listing as contained in the ARB Television Market Analysis for the most recent year at the time that the exclusivity contract, arrangement or understanding is complete under practices of the industry. As used in this paragraph, the term "community" is defined as the community specified in the instrument of authorization as the location of the station.

(2) Notwithstanding paragraph (m)(1) of this section, a television station may enter into a contract, arrangement, or understanding with a producer, supplier, or distributor of a non-network program if that contract, arrangement, or understanding provides that the broadcast station has exclusive national rights such that no other television station in the United States may broadcast the program.

NOTE 1: Contracts, arrangements, or understandings that are complete under the practices of the industry prior to August 7, 1973, will not be disturbed. Extensions or renewals of such agreements are not permitted because they would in effect be new agreements without competitive bidding. However, such agreements that were based on the broadcaster's advancing "seed money" for the production of a specific program or series that specify two time periods—a tryout period and period thereafter for general exhibition—may be extended or renewed as contemplated in the basic agreement.

NOTE 2: It is intended that the top 100 major television markets listed in § 76.51 of this chapter shall be used for the purposes of this rule and that the listing of the top 100 television markets appearing in the ARB Television Market Analysis shall not be used. The reference in this rule to the listing of markets in the ARB Television Market Analysis refers to hyphenated markets below the top-100 markets contained in the ARB Television Market Analysis. If a community is listed in a hyphenated market in § 76.51 and is also listed in one of the markets in the ARB listing, the listing in § 76.51 shall govern.

NOTE 3: The provisions of this paragraph apply only to U.S. commercial television broadcast stations in the 50 states, and not to stations in Puerto Rico or the Virgin Islands, foreign stations or noncommercial educational television or "public" television stations (either by way of restrictions on their exclusivity or on exclusivity against them).

NOTE 4: New stations authorized in any community of a hyphenated market listed in § 76.51 of this chapter or in any community of a hyphenated market listed in the ARB Television Market Analysis (for markets below the top-100 markets) are subject to the same rules as previously existing stations therein. New stations authorized in other communities are considered stations in separate markets unless and until § 76.51 is amended by Commission action, or the ARB listing is changed.

(Sec. 5, 48 Stat. 1068 (47 U.S.C. 155))

[28 FR 13660, Dec. 14, 1963]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 73.658, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 73.663 Determining operating power.

(a) The operating power of each TV visual transmitter shall normally be determined by the direct method.

(b) *Direct method, visual transmitter.* The direct method of power determination for a TV visual transmitter uses the indications of a calibrated transmission line meter (responsive to peak power) located at the RF output terminals of the transmitter. The indications of the calibrated meter are used to observe and maintain the authorized operating power of the visual transmitter. This meter must be calibrated whenever any component in the metering circuit is repaired or replaced and as often as necessary to ensure operation in accordance with the provisions of § 73.1560 of this part. The following calibration procedures are to be used:

(1) The transmission line meter is calibrated by measuring the average power at the output terminals of the transmitter, including any vestigial sideband and harmonic filters which may be used in normal operation. For this determination the average power output is measured while operating into a dummy load of substantially zero reactance and a resistance equal to the transmission line characteristic impedance. During this measurement the transmitter is to be modulated only by a standard synchronizing signal with blanking level set at 75% of peak amplitude as observed in an output waveform monitor, and with this blanketing level amplitude maintained throughout the time interval between synchronizing pulses.

(2) If electrical devices are used to determine the output power, such devices must permit determination of this power to within an accuracy of ±5% of the power indicated by the full scale reading of the electrical indicating instrument of the device. If temperature and coolant flow indicating devices are used to determine the power output, such devices must permit determination of this power to within an accuracy of ±4% of measured average power output. The peak power output is the power so measured in the dummy load multiplied by the factor 1.68. During this measurement the input voltage and current to the final radio frequency amplifier stage and the transmission line meter are to be read and compared with similar readings taken with the dummy load replaced by the antenna. These readings must be in substantial agreement.

(3) The meter must be calibrated with the transmitter operating at 80%, 100%, and 110% of the authorized power as often as may be necessary to maintain its accuracy and ensure correct transmitter operating power. In cases where the transmitter is incapable of operating at 110% of the authorized power output, the calibration may be made at a power output between 100% and 110% of the authorized power output. However, where this is done, the output meter must be marked at the point of calibration of maximum power output, and the station will be deemed to be in violation of this rule if that power is exceeded. The upper and lower limits of permissible power deviation as determined by

the prescribed calibration, must be shown upon the meter either by means of adjustable red markers incorporated in the meter or by red marks placed upon the meter scale or glass face. These markings must be checked and changed, if necessary, each time the meter is calibrated.

(c) *Indirect method, visual transmitter.* The operating power is determined by the indirect method by applying an appropriate factor to the input power to the final radio-frequency amplifier stage of the transmitter using the following formula:

Transmitter output power = Ep x Ip x *F*

Where:

Ep = DC input voltage of the final radio-frequency amplifier stage.
Ip = DC input current of the final radio-frequency amplifier stage.
F = Efficiency factor.

(1) If the above formula is not appropriate for the design of the transmitter final amplifier, use a formula specified by the transmitter manufacturer with other appropriate operating parameters.

(2) The value of the efficiency factor, *F* established for the authorized transmitter output power is to be used for maintaining the operating power, even though there may be some variation in *F* over the power operating range of the transmitter.

(3) The value of *F* is to be determined and a record kept thereof by one of the following procedures listed in order of preference:

(i) Using the most recent measurement data for calibration of the transmission line meter according to the procedures described in paragraph (b) of this section or the most recent measurements made by the licensee establishing the value of F. In the case of composite transmitters or those in which the final amplifier stages have been modified pursuant to FCC approval, the licensee must furnish the FCC and also retain with the station records the measurement data used as a basis for determining the value of F.

(ii) Using measurement data shown on the transmitter manufacturer's test data supplied to the licensee, provided that measurements were made at the authorized carrier frequency and transmitter output power.

(iii) Using the transmitter manufacturer's measurement data submitted to the FCC for type acceptance as shown in the instruction book supplied to the licensee.

NOTE: Refer to § 73.1560 for aural transmitter output power levels.

[44 FR 58732, Oct. 11, 1979, as amended at 48 FR 44805, Sept. 30, 1983; 49 FR 4210, Feb. 3, 1984; 49 FR 22092, May 25, 1984; 49 FR 49851, Dec. 24, 1984; 50 FR 26568, June 27, 1985; 54 FR 9806, Mar. 8, 1989]

§ 73.665 Use of TV aural baseband subcarriers.

Licensees of TV broadcast stations may transmit, without further authorization from the FCC, subcarriers and signals within the composite baseband for the following purposes:

(a) Stereophonic (biphonic, quadraphonic, etc.) sound programs under the provisions of §§ 73.667 and 73.669.

(b) Transmission of signals relating to the operation of TV stations, such as relaying broadcast materials to other stations, remote cueing and order messages, and control and telemetry signals for the transmitting system.

(c) Transmission of pilot or control signals to enhance the station's program service such as (but not restricted to) activation of noise reduction decoders in receivers, for any other receiver control purpose, or for program alerting and program identification.

(d) Subsidiary communications services.

[49 FR 18105, Apr. 27, 1984]

§ 73.667 TV subsidiary communications services.

(a) Subsidiary communications services are those transmitted within the TV aural baseband signal, but do not include services which enhance the main program broadcast service or exclusively relate to station operations (see § 73.665(a), (b), and (c)). Subsidiary communications include, but are not limited to, services such as functional music, specialized foreign

(b) TV subsidiary communications services that are common carrier or private radio in nature are subject to common carrier or private radio regulation. Licensees operating such services are required to apply to the FCC for the appropriate authorization and to comply with all policies and rules applicable to the service. Responsibility for making the initial determinations of whether a particular activity requires separate authority rests with the TV station licensee or permittee. Initial determinations by licensees or permittees are subject to FCC examination and may be reviewed at the FCC's discretion.

(c) Subsidiary communications services are of a secondary nature under the authority of the TV station authorization, and the authority to provide such communications services may not be retained or transferred in any manner separate from the station's authorization. The grant or renewal of a TV station permit or license is not furthered or promoted by proposed or past subsidiary communications services. The permittee or licensee must establish that the broadcast operation is in the public interest wholly apart from the subsidiary communications services provided.

(d) The station identification, delayed recording, and sponsor identification announcement required by §§ 73.1201, 73.1208, and 73.1212 are not applicable to leased communications services transmitted via services that are not of a general broadcast nature.

(e) The licensee or permittee must retain control over all material transmitted in a broadcast mode via the station's facilities, with the right to reject any material that it deems inappropriate or undesirable.

[49 FR 18105, Apr. 27, 1984, as amended at 49 FR 27147, July 2, 1984]

§ 73.669 TV stereophonic aural and multiplex subcarrier operation.

(a) A TV broadcast station may without specific authority from the FCC, transmit multichannel aural programs upon installation of multichannel sound equipment. Prior to commencement of multichannel broadcasting, the equipment shall be measured in accordance with § 73.1690(e).

(b) Multiplex subcarriers may be used by a TV station pursuant to the provisions of § 73.665 and may be transmitted on a secondary, non-interference basis to broadcast programming without specific authority from the FCC. Transmissions must be conducted in accordance with the technical standards given in § 73.682(c).

(c) In all arrangements entered into with outside parties affecting non-common carrier subcarrier operation, the licensee or permittee must retain control over all material transmitted over the station's facilities, with the right to reject any material which is deemed inappropriate or undesirable. Subchannel leasing arrangements must be kept in writing at the station and made available to the FCC upon request.

[49 FR 18106, Apr. 27, 1984]

§ 73.681 Definitions.

Amplitude modulation (*AM*). A system of modulation in which the envelope of the transmitted wave contains a component similar to the wave form of the signal to be transmitted.

Antenna electrical beam tilt. The shaping of the radiation pattern in the vertical plane of a transmitting antenna by electrical means so that maximum radiation occurs at an angle below the horizontal plane.

Antenna height above average terrain. The average of the antenna heights above the terrain from approximately 3.2 (2 miles) to 16.1 kilometers (10 miles) from the antenna for the eight directions spaced evenly for each 45 degrees of azimuth starting with True North. (In general, a different antenna height will be determined in each direction from the antenna. The average of these various heights is considered the antenna height above the average terrain. In some cases less than 8 directions may be used. See § 73.684(d)). Where circular or elliptical polarization is employed, the antenna height above average terrain shall be based upon the height of the radiation center of the antenna which transmits the horizontal component of radiation.

Antenna mechanical beam tilt. The intentional installation of a transmitting antenna so that its axis is not vertical, in order to change the normal angle of maximum radiation in the vertical plane.

Antenna power gain. The square of the ratio of the root-mean-square free space field strength produced at one mile in the horizontal plane, in millivolts per meter for one kW antenna input power to 137.6 mV/m. This ratio should be expressed in decibels (dB). (If specified for a particular direction, antenna power gain is based on the field strength in that direction only.)

Aspect ratio. The ratio of picture width to picture height as transmitted.

Aural center frequency. (1) The average frequency of the emitted wave when modulated by a sinusoidal signal; (2) the frequency of the emitted wave without modulation.

Aural transmitter. The radio equipment for the transmission of the aural signal only.

BTSC. Broadcast Television systems committee recommendation for multichannel television sound transmission and audio processing as defined in FCC Bulletin OET 60.

Baseband. Aural transmitter input signals between 0 and 120 kHz.

Blanking level. The level of the signal during the blanking interval, except the interval during the scanning synchronizing pulse and the chrominance subcarrier synchronizing burst.

Chrominance. The colorimetric difference between any color and a reference color of equal luminance, the reference color having a specific chromaticity.

Chrominance subcarrier. The carrier which is modulated by the chrominance information.

Color transmission. The transmission of color television signals which can be reproduced with different values of hue, saturation, and luminance.

Effective radiated power. The product of the antenna input power and the antenna power gain. This product should be expressed in kW and in dB above 1 KW (dBk). (If specified for a particular direction, effective radiated power is based on the antenna power gain in that direction only. The licensed effective radiated power is based on the maximum antenna power gain. When a station is authorized to use a directional antenna or an antenna beam tilt, the direction of the maximum effective radiated power will be specified.) Where circular or elliptical polarization is employed, the term effective radiated power is applied separately to the horizontally and vertically polarized components of radiation. For assignment purposes, only the effective radiated power authorized for the horizontally polarized component will be considered.

Equivalent isotropically radiated power (EIRP). The term "equivalent isotropically radiated power" (also known as "effective radiated power above isotropic") means the product of the antenna input power and the antenna gain in a given direction relative to an isotropic antenna.

Field. Scanning through the picture area once in the chosen scanning pattern. In the line interlaced scanning pattern of two to one, the scanning of the alternate lines of the picture area once.

Frame. Scanning all of the picture area once. In the line interlaced scanning pattern of two to one, a frame consists of two fields.

Free space field strength. The field strength that would exist at a point in the absence of waves reflected from the earth or other reflecting objects.

Frequency departure. The amount of variation of a carrier frequency or center frequency from its assigned value.

Frequency deviation. The peak difference between the instantaneous frequency of the modulated wave and the carrier frequency.

Frequency modulation (FM). A system of modulation where the instantaneous radio frequency varies in proportion to the instantaneous amplitude of the modulating signal (amplitude of modulating signal to be measured after pre-emphasis, if used) and the instantaneous radio frequency is independent of the frequency of the modulating signal.

Frequency swing. The peak difference between the maximum and the minimum values of the instantaneous frequency of the carrier wave during modulation.

Interlaced scanning. A scanning process in which successively scanned lines are spaced an integral number of line widths, and in which the adjacent lines are scanned during successive cycles of the field frequency.

IRE standard scale. A linear scale for measuring, in IRE units, the relative amplitudes of the components of a television signal from a zero reference at blanking level, with picture information falling in the positive, and synchronizing information in the negative domain.

NOTE: When a carrier is amplitude modulated by a television signal in accordance with § 73.682, the relationship of the IRE standard scale to the conventional measure of modulation is as follows:

Level	IRE standard scale (units)	Modulation percentage
Zero carrier	120	0
Reference white	100	12.5
Blanking	0	75
Synchronizing peaks (maximum carrier level)	−40	100

Luminance. Luminous flux emitted, reflected, or transmitted per unit solid angle per unit projected area of the source.

Main channel. The band of frequencies from 50 to 15,000 Hertz which frequency modulate the main aural carrier.

Monochrome transmission. The transmission of television signals which can be reproduced in gradations of a single color only.

Multichannel Television Sound (MTS). Any system of aural transmission that utilizes aural baseband operation between 15 kHz and 120 kHz to convey information or that encodes digital information in the video portion of the television signal that is intended to be decoded as audio information.

Multiplex Transmission (Aural). A subchannel added to the regular aural carrier of a television broadcast station by means of frequency modulated subcarriers.

Negative transmission. Where a decrease in initial light intensity causes an increase in the transmitted power.

Peak power. The power over a ra frequency cycle corresponding in a plitude to synchronizing peaks.

Percentage modulation. As appli to frequency modulation, the ratio the actual frequency deviation to t frequency deviation defined as 10 modulation expressed in percenta For the aural transmitter of TV bro cast stations, a frequency deviation ±25 kHz is defined as 100% modu tion.

Pilot subcarrier. A subcarrier used the reception of TV stereopho aural or other subchannel broadca

Polarization. The direction of t electric field as radiated from t transmitting antenna.

Program related data signal. signal, consisting of a series of puls representing data, which is transm ted simultaneously with and direct related to the accompanying televisi program.

Reference black level. The level co responding to the specified maximu excursion of the luminance signal the black direction.

Reference white level of the lum nance signal. The level correspondi to the specified maximum excursion the luminance signal in the white rection.

Scanning. The process of analyzin successively, according to a predete mined method, the light values of pi ture elements constituting the tot picture area.

Scanning line. A single continuo narrow strip of the picture area co taining highlights, shadows, and hal tones, determined by the process scanning.

Standard television signal. A sign which conforms to the televisio transmission standards.

Synchronization. The maintenanc of one operation in step with anothe

Television broadcast band. The fre quencies in the band extending fro 54 to 806 megahertz which are assign ble to television broadcast statio These frequencies are 54 to 72 meg hertz (channels 2 through 4), 76 to 8 megahertz (channels 5 and 6), 174 t 216 megahertz (channels 7 throug 13), and 470 to 806 megahertz (cha nels 14 through 69).

Television broadcast station. A station in the television broadcast band transmitting simultaneous visual and aural signals intended to be received by the general public.

Television channel. A band of frequencies 6 MHz wide in the television broadcast band and designated either by number or by the extreme lower and upper frequencies.

Television transmission standards. The standards which determine the characteristics of a television signal as radiated by a television broadcast station.

Television transmitter. The radio transmitter or transmitters for the transmission of both visual and aural signals.

Vestigial sideband transmission. A system of transmission wherein one of the generated sidebands is partially attenuated at the transmitter and radiated only in part.

Visual carrier frequency. The frequency of the carrier which is modulated by the picture information.

Visual transmitter. The radio equipment for the transmission of the visual signal only.

Visual transmitter power. The peak power output when transmitting a standard television signal.

[28 FR 13660, Dec. 14, 1963, as amended at 35 FR 5692, Apr. 8, 1970; 36 FR 5505, Mar. 24, 1971; 36 FR 17429, Aug. 31, 1971; 41 FR 56325, Dec. 28, 1976; 42 FR 20823, Apr. 22, 1977; 44 FR 36039, June 20, 1979; 47 FR 35990, Aug. 18, 1982; 49 FR 18106, Apr. 27, 1984; 49 FR 38131, Sept. 27, 1984; 49 FR 50048, Dec. 26, 1984; 50 FR 23699, June 5, 1985; 51 FR 12616, Apr. 14, 1986]

§ 73.682 TV transmission standards.

(a) *Transmission standards.* (1) The width of the television broadcast channel shall be 6 MHz.

(2) The visual carrier frequency shall be nominally 1.25 MHz above the lower boundary of the channel.

(3) The aural center frequency shall be 4.5 MHz higher than the visual carrier frequency.

(4) The visual transmission amplitude characteristic shall be in accordance with the chart designated as Figure 5 of § 73.699: *Provided, however,* That for stations operating on Channel 15 through 69 and employing a transmitter with maximum peak visual power output of 1 kW or less the visual transmission amplitude characteristic may be in accordance with the chart designated as Figure 5a of § 73.699.

(5) The chrominance subcarrier frequency is 63/88 times precisely 5 MHz (3.57954545 . . . MHz). The tolerance is ± 10 Hz and the rate of frequency drift must not exceed 0.1 Hz per second (cycles per second squared).

(6) For monochrome and color transmissions the number of scanning lines per frame shall be 525, interlaced two to one in successive fields. The horizontal scanning frequency shall be 2/455 times the chrominance subcarrier frequency; this corresponds nominally to 15,750 Hz with an actual value of 15,734.264 ±0.044 Hz). The vertical scanning frequency is 2/525 times the horizontal scanning frequency; this corresponds nominally to 60 Hz (the actual value is 59.94 Hz). For monochrome transmissions only, the nominal values of line and field frequencies may be used.

(7) The aspect ratio of the transmitted television picture shall be 4 units horizontally to 3 units vertically.

(8) During active scanning intervals, the scene shall be scanned from left to right horizontally and from top to bottom vertically, at uniform velocities.

(9) A carrier shall be modulated within a single television channel for both picture and synchronizing signals. The two signals comprise different modulation ranges in amplitude in accordance with the following:

(i) Monochrome transmissions shall comply with synchronizing waveform specifications in Figure 7 of § 73.699.

(ii) Color transmissions shall comply with the synchronizing waveform specifications in Figure 6 of § 73.699.

(iii) All stations operating on Channels 2 through 14 and those stations operating on Channels 15 through 69 licensed for a peak visual transmitter output power greater than one kW shall comply with the picture transmission amplitude characteristics shown in Figure 5 of § 73.699.

(iv) Stations operating on Channels 15 through 69 licensed for a peak visual transmitter output power of one kW or less shall comply with the picture transmission amplitude characteristic shown in Figure 5 or 5a of § 73.699.

(10) A decrease in initial light intensity shall cause an increase in radiated power (negative transmission).

(11) The reference black level shall be represented by a definite carrier level, independent of light and shade in the picture.

(12) The blanking level shall be transmitted at 75±2.5 percent of the peak carrier level.

(13) The reference white level of the luminance signal shall be 12.5±2.5 percent of the peak carrier level.

(14) It shall be standard to employ horizontal polarization. However, circular or elliptical polarization may be employed if desired, in which case clockwise (right hand) rotation, as defined in the IEEE Standard Definition 42A65-3E2, and transmission of the horizontal and vertical components in time and space quadrature shall be used. For either omnidirectional or directional antennas the licensed effective radiated power of the vertically polarized component may not exceed the licensed effective radiated power of the horizontally polarized component. For directional antennas, the maximum effective radiated power of the vertically polarized component shall not exceed the maximum effective radiated power of the horizontally polarized component in any specified horizontal or vertical direction.

(15) The effective radiated power of the aural transmitter must not exceed 22% of the peak radiated power of the visual transmitter.

(16) The peak-to-peak variation of transmitter output within one frame of video signal due to all causes, including hum, noise, and low-frequency response, measured at both scanning synchronizing peak and blanking level, shall not exceed 5 percent of the average scanning synchronizing peak signal amplitude. This provision is subject to change but is considered the best practice under the present state of the art. It will not be enforced pending a further determination thereof.

(17) The reference black level shall be separated from the blanking level by the setup interval, which shall be 7.5±2.5 percent of the video range from blanking level to the reference white level.

(18) For monochrome transmission, the transmitter output shall vary in substantially inverse logarithmic relation to the brightness of the subject. No tolerances are set at this time. This provision is subject to change but is considered the best practice under the present state of the art. It will not be enforced pending a further determination thereof.

(19) The color picture signal shall correspond to a luminance component transmitted as amplitude modulation of the picture carrier and a simultaneous pair of chrominance components transmitted as the amplitude modulation sidebands of a pair of suppressed subcarriers in quadrature.

(20) Equation of complete color signal.

(i) The color picture signal has the following composition:

$$E_M = E_Y' + [E_Q' \sin(\omega t + 33^\circ) + E_I' \cos(\omega t + 33^\circ)]$$

Where:

$$E_Q' = 0.41(E_B' - E_Y') + 0.48(E_R' - E_Y'),$$
$$E_I' = -0.27(E_B' - E_Y') + 0.74(E_R' - E_Y'),$$
$$E_Y' = 0.30E_R' + 0.59E_G' + 0.—1E_B'.$$

For color-difference frequencies below 500 kHz (see (iii) below), the signal can be represented by:

$$E_M = E_Y' + [(1/1.14)[(1/1.78)(E_B' - E_Y') \sin \omega t + (E_R' - E_Y') \cos \omega t]]$$

(ii) The symbols in paragraph (a)(20)(i) of this section have the following significance:

E_M is the total video voltage, corresponding to the scanning of a particular picture element, applied to the modulator of the picture transmitter.

E_Y' is the gamma-corrected voltage of the monochrome (black-and-white) portion of the color picture signal, corresponding to the given picture element.

NOTE: Forming of the high frequency portion of the monochrome signal in a different manner is permissible and may in fact be desirable in order to improve the sharpness on saturated colors.

E_Q' and E_I' are the amplitudes of two orthogonal components of the chrominance signal corresponding respectively to narrow-band and wide-band axes.

E_R', E_G', and E_B' are the gamma-corrected voltages corresponding to red, green, and blue signals during the scanning of the given picture element.

ω is the angular frequency and is 2 times the frequency of the chrominance subcarrier.

The portion of each expression between brackets in (i) represents the chrominance subcarrier signal which carries the chrominance information.

The phase reference in the E_M equation in (i) is the phase of the burst + 180°, as shown in Figure 8 of § 73.699. The burst corresponds to amplitude modulation of a continuous sine wave.

(iii) The equivalent bandwidth assigned prior to modulation to the color difference signals E_Q' and E_I' are as follows:

Q-channel bandwidth:
At 400 kHz less than 2 dB down.
At 500 kHz less than 6 dB down.
At 600 kHz at least 6 dB down.
I-channel bandwidth:
At 1.3 MHz less than 2 dB down.
At 3.6 MHz at least 20 dB down.

(iv) The gamma corrected voltages E_R', E_G', and E_B' are suitable for a color picture tube having primary colors with the following chromaticities in the CIE system of specification:

	x	y
ed (R)	0.67	0.33
reen (G)	0.21	0.71
ue (B)	0.14	0.08

nd having a transfer gradient gamma exponent) of 2.2 associated with each primary color. The voltages E_R', E_G', and E_B' may be respectively of he form $E_R{}^{1/\gamma}$, $E_G{}^{1/\gamma}$, and $E_B{}^{1/\gamma}$ although other forms may be used with dvances in the state of the art.

NOTE: At the present state of the art it is onsidered inadvisable to set a tolerance on he value of gamma and correspondingly his portion of the specification will not be nforced.

(v) The radiated chrominance subarrier shall vanish on the reference hite of the scene.

NOTE: The numerical values of the signal pecification assume that this condition will e reproduced as CIE Illuminant C $x=0.310$, $y=0.316$).

(vi) E_Y', E_Q', E_I', and the components f these signals shall match each ther in time to 0.05 μsecs.

(vii) The angles of the subcarrier easured with respect to the burst hase, when reproducing saturated primaries and their complements at 75 percent of full amplitude, shall be within ±10° and their amplitudes shall be within ±20 percent of the values specified above. The ratios of the measured amplitudes of the subcarrier to the luminance signal for the same saturated primaries and their complements shall fall between the limits of 0.8 and 1.2 of the values specified for their ratios. Closer tolerances may prove to be practicable and desirable with advance in the art.

(21) The interval beginning with line 17 and continuing through line 20 of the vertical blanking interval of each field may be used for the transmission of test signals, cue and control signals, and identification signals, subject to the conditions and restrictions set forth below. Test signals may include signals designed to check the performance of the overall transmission system or its individual components. Cue and control signals shall be related to the operation of the TV broadcast station. Identification signals may be transmitted to identify the broadcast material or its source, and the date and time of its origination. Figures 6 and 7 of § 73.699 identify the numbered lines referred to in this paragraph.

(i) Modulation of the television transmitter by such signals shall be confined to the area between the reference white level and the blanking level, except where test signals include chrominance subcarrier frequencies, in which case positive excursions of chrominance components may exceed reference white, and negative excursions may extend into the synchronizing area. In no case may the modulation excursions produced by test signals extend beyond peak-of-sync, or to zero carrier level.

(ii) The use of such signals shall not result in significant degradation of the program transmission of the television broadcast station, nor produce emission outside of the frequency band occupied for normal program transmissions.

(iii) Such signals may not be transmitted during that portion of each line devoted to horizontal blanking.

(iv) Regardless of other provisions of this paragraph, line 19, in each field, may be used only for the transmission of the reference signal described in Figure 16 of § 73.699.

(22)(i) All of Line 21, Field 1 and the first half of Line 21, Field 2 may be used for the transmission of a program related data signal which, when decoded, provides a visual depiction of information simultaneously being presented on the aural channel. Such data signal shall conform to the format described in Figure 17a of § 73.699 and may be transmitted during all periods of regular operation.

(A) A reference pulse for a decoder associated adaptive multipath equalizer filter may replace the data signal every eighth frame. The reference pulse shall conform to the format described in Figure 17b of § 73.699.

(B) A decoder test signal consisting of data representing a repeated series of alphanumeric characters may be transmitted at times when no program related data is being transmitted.

(C) A framing code to be used by the data decoder may be transmitted during the first half of Line 21, Field 2 when data, reference pulse and test signals are present. See Figure 17c of § 73.699 for a description of the format for the framing code.

(D) The data signal shall be coded using a non-return-to-zero (NRZ) format and shall employ standard ASCII 7 bit plus parity character codes.

(ii) At times when Line 21 is not being used to transmit a program related data signal, data signals which are not program related may be transmitted, *Provided*: the same data format is used and the information to be displayed is of a broadcast nature.

(iii) The use of Line 21 for transmission of other data signals conforming to other formats may be used subject to prior authorization by the Commission.

(iv) The data signal shall cause no significant degradation to any portion of the visual signal nor produce emissions outside the authorized television channel.

(v) Transmission of visual emergency messages pursuant to § 73.1250 shall take precedence and shall be cause for interrupting transmission of data signals permitted under this paragraph.

(23) Specific scanning lines in the vertical blanking interval may be used for the purpose of transmitting telecommunications signals in accordance with § 73.646, subject to certain conditions:

(i) Telecommunications may be transmitted on Lines 10-18 and 20, all of Field 2 and Field 1. Modulation level shall not exceed 70 IRE on lines 10, 11, and 12; and, 80 IRE on lines 13-18 and 20.

(ii) No observable degradation may be caused to any portion of the visual or aural signals.

(iii) Telecommunications signals must not produce emissions outside the authorized television channel bandwidth. Digital data pulses must be shaped to limit spectral energy to the nominal video baseband.

(iv) Transmission of emergency visual messages pursuant to § 73.1250 must take precedence over, and shall be cause for interrupting, a service such as teletext that provides a visual depiction of information simultaneously transmitted on the aural channel.

(v) A reference pulse for a decoder associated adaptive equalizer filter designed to improve the decoding of telecommunications signals may be inserted on any portion of the vertical blanking interval authorized for data service, in accordance with the signal levels set forth in paragraph (a)(23)(i) of this section.

(vi) All lines authorized for telecommunications transmissions may be used for other purposes upon prior approval by the Commission.

(b) *Subscription TV technical systems.* The FCC may specify, as part of the advance approval of the technical system for transmitting encoded subscription programming, deviations from the power determination procedures, operating power levels, aural or video baseband signals, modulation levels or other characteristics of the transmitted signal as otherwise specified in this Subpart. Any decision to approve such operating deviations shall be solely at the discretion of the FCC.

(c) TV multiplex subcarrier/stereophonic aural transmission standards.

(1) The modulating signal for the main channel shall consist of the sum of the stereophonic (biphonic, quadraphonic, etc.) input signals.

(2) The instantaneous frequency of the baseband stereophonic subcarrier must at all times be within the range 15 kHz to 120 kHz. Either amplitude or frequency modulation of the stereophonic subcarrier may be used.

(3) One or more pilot subcarriers between 16 kHz and 120 kHz may be used to switch a TV receiver between the stereophonic and monophonic reception modes or to activate a stereophonic audio indicator light, and one or more subcarriers between 15 kHz and 120 kHz may be used for any other authorized purpose; except that stations employing the BTSC system of stereophonic sound transmission and audio processing may transmit a pilot subcarrier at 15,734 Hz, ± 2 Hz. Other methods of multiplex subcarrier or stereophonic aural transmission systems must limit energy at 15,734 Hz, ± 20 Hz, to no more than ± 0.125 kHz aural carrier deviation.

(4) Aural baseband information above 120 kHz must be attenuated 40 dB referenced to 25 kHz main channel deviation of the aural carrier.

(5) For required transmitter performance, all of the requirements of § 73.687(b) shall apply to the main channel, with the transmitter in the multiplex subcarrier or stereophonic aural mode.

(6) For electrical performance standards of the transmitter, the requirements of § 73.687(b) apply to the main channel.

(7) Multiplex subcarrier or stereophonic aural transmission systems must be capable of producing and must not exceed ± 25 kHz main channel deviation of the aural carrier.

(8) The arithmetic sum of non-multiphonic baseband signals between 15 kHz and 120 kHz must not exceed ±50 kHz deviation of the aural carrier.

(9) Total modulation of the aural carrier must not exced ± 75 kHz.

Schedule I

	1983	1984	1985	1986	1987	1988	1989	1990	1991
10	X	X	X	X	X	50 IRE	←	→	70 IRE
11	X	X	X	X	X	50 IRE	←	→	70 IRE
12	X	X	X	X	X	50 IRE	←	→	70 IRE
13	X	X	X	X	X	70 IRE	80 IRE	80 IRE	80 IRE
14	40 IRE	←			→	70 IRE	80 IRE	80 IRE	80 IRE
15	80 IRE	←							→
16	80 IRE	←							→
17	80 IRE */**	←							→
18	80 IRE */**	←							→
19	***								
20	80 IRE **	←							→

* Also authorized for Vertical Interval Test Signals (VITS) that are used with remote controlled transmitters.

** Also authorized for SID signals (Source Identification signals).

*** Presently reserved to the Vertical Interval Reference (VIR) signal.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[28 FR 13660, Dec. 14, 1963]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 73.682, see the List of CFR Sections Affected appearing in the Finding Aids section of this volume.

§ 73.683 Field strength contours.

(a) In the authorization of TV stations, two field strength contours are considered. These are specified as Grade A and Grade B and indicate the approximate extent of coverage over average terrain in the absence of interference from other television stations. Under actual conditions, the true coverage may vary greatly from these estimates because the terrain over any specific path is expected to be different from the average terrain on which the field strength charts were based. The required field strength, *F* (50,50), in dB above one micro-volt per meter (dBu) for the Grade A and Grade B contours are as follows:

	Grade A (dBu)	Grade B (dBu)
Channels 2–6	68	47
Channels 7–13	71	56
Channels 14–69	74	64

(b) It should be realized that the F (50,50) curves when used for Channels 14-69 are not based on measured data at distances beyond about 48.3 kilometers (30 miles). Theory would indicate that the field strengths for Channels 14-69 should decrease more rapidly with distance beyond the horizon than for Channels 2-6, and modification of the curves for Channels 14-69 may be expected as a result of measurements to be made at a later date. For these reasons, the curves should be used with appreciation of their limitations in estimating levels of field strength. Further, the actual extent of service will usually be less than indicated by these estimates due to interference from other stations. Because of these factors, the predicted field strength contours give no assurance of service to any specific percentage of receiver locations within the distances indicated. In licensing proceedings these variations will not be considered.

(c) The field strength contours will be considered for the following purposes only:

(1) In the estimation of coverage resulting from the selection of a particular transmitter site by an applicant for a TV station.

(2) In connection with problems of coverage arising out of application of § 73.3555.

(3) In determining compliance with § 73.685(a) concerning the minimum field strength to be provided over the principal community to be served.

[44 FR 36039, June 20, 1979, as amended at 47 FR 35990, Aug. 18, 1982; 50 FR 23699, June 5, 1985; 50 FR 32416, Aug. 12, 1985]

§ 73.684 Prediction of coverage.

(a) All predictions of coverage made pursuant to this section shall be made without regard to interference and shall be made only on the basis of estimated field strengths. The peak power of the visual signal is used in making predictions of coverage.

(b) Predictions of coverage shall be made only for the same purposes as relate to the use of field strength contours as specified in § 73.683(c).

(c) In predicting the distance to the field strength contours, the F (50,50) field strength charts (Figures 9 and 10 of § 73.699) shall be used. If the 50% field strength is defined as that value exceeded for 50% of the time, these F (50,50) charts give the estimated 50% field strengths exceeded at 50% of the locations in dB above 1 uV/m. The charts are based on an effective power of 1 kW radiated form a half-wave dipole in free space, which produces an unattenuated field strength at 1.61 kilometers (1 mile) of about 103 dB above 1 uV/m. To use the charts to predict the distance to a given contour, the following procedure is used: Convert the effective radiated power in kilowatts for the appropriate azimuth into decibel value referenced to 1 kW (dBu). If necessary, convert the selected contour to the decibel value (dBu) above 1 microvolt per meter (1 uV/m). Subtract the power value in dBk from the contour value in dBu. Note that for power less than 1 kW, the difference value will be greater than the contour value because the power in dBk is negative. Locate the difference value obtained on the vertical scale at the left edge of the chart. Follow the horizontal line for that value into the chart to the point of intersection with the vertical line above the height of the antenna above average terrain for the appropriate azimuth located on the scale at the bottom of the chart. If the point of intersection does not fall exactly on a distance curve, interpolate between the distance curves below and above the intersection point. The distance values for the curves are located along the right edge of the chart.

(1) In predicting the distance to the Grade A and Grade B field strength contours, the effective radiated power to be used is that radiated at the vertical angle corresponding to the depression angle between the transmitting antenna center of radiation and the radio horizon as determined individually for each azimuthal direction concerned. The depression angle is based on the difference in elevation of the antenna center of radiation above the average terrain and the radio horizon, assuming a smooth sperical earth with a radius of 8,495.5 kilometers (5,280 miles) and shall be determined by the following equation:

$$A = 0.0277\sqrt{H}$$

Where:

A is the depression angle in degrees.

H is the height in meters of the transmitting antenna radiation center above average terrain of the 3.2—16.1 kilometers (2-10 miles) sector of the pertinent radial.

This formula is empirically derived for the limited purpose specified here. Its use for any other purpose may be inappropriate.

(2) In case where the relative field strength at the depression angle determined by the above formula is 90% or more of the maximum field strength developed in the vertical plane containing the pertaining radial, the maximum radiation shall be used.

(3) In predicting field strengths for other than the Grade A and Grade B contours, the effective radiated power to be used is to be based on the appropriate antenna vertical plane radiation pattern for the azimuthal direction concerned.

(4) Applicants for new TV stations or changes in the facilities of existing TV stations must submit to the FCC a showing as to the location of their stations' or proposed stations' predicted Grade A and Grade B contours, determined in accordance with § 73.684. This showing is to include maps showing these contours, except where applicants have previously submitted material to the FCC containing such information and it is found upon careful examination that the contour locations indicated therein would not change, on any radial, when the locations are determined under this Section. In the latter cases, a statement by a qualified engineer to this effect will satisfy this requirement and no contour maps need be submitted.

(d) The antenna height to be used with these charts is the height of the radiation center of the antenna above the average terrain along the radial in question. In determining the average elevation of the terrain, the elevations between 3.2-16.1 kilometers (2-10 miles) from the antenna site are employed. Profile graphs shall be drawn for 8 radials beginning at the antenna site and extending 16.1 kilometers (10 miles) therefrom. The radials should be drawn for each 45 degrees of azimuth starting with the True North. At least one radial must include the principal community to be served even though such community may be more than 16.1 kilometers (10 miles) from the antenna site. However, in the event none of the evenly spaced radials include the principal community to be served and one or more such radials are drawn in addition to the 8 evenly spaced radials, such additional radials shall not be employed in computing the antenna height above average terrain. Where the 3.2-16.1 kilometers (2-10 mile) portion of a radial extends in whole or in part over large bodies of water as specified in paragraph (e) of this section or extends over foreign territory but the Grade B strength contour encompasses land area within the United States beyond the 16.1 kilometers (10 mile) portion of the radial, the entire 3.2-16.1 kilometers (2-10 mile) portion of the radial shall be included in the computation of antenna height above average terrian. However, where the Grade B contour does not so encompass United States land area and (1) the entire 3.2-16.1 kilometers (2-10 mile) portion of the radial extends over large bodies of water of foreign territory, such radial shall be completely omitted from the computation of antenna height above average terrain, and (2) where a part of the 3.2-16.1 kilometers (2-10 mile) portion of a radial extends over large bodies of water or over foreign territory, only that part of the radial extending from the 3.2 kilometer (2 mile) sector to the outermost portion of land area within the United States covered by the radial shall be employed in the computation of antenna height above average terrian. The profile graph for each radial should be plotted by contour intervals of from 12.2-30.5 meters (40-100 feet) and, where the data permits, at least 50 points of elevation (generally uniformly spaced) should be used for each radial. In instances of very rugged terrain where the use of contour intervals of 30.5 meters (100 feet) would result in several points in a short distance, 61.0-122.0 meter (200-400 foot) contour intervals may be used for such distances. On the other hand, where the terrain is uniform or gently sloping the smallest contour interval indicated on the topograhic may (see paragraph (g) of this section) should be used, although only relatively few points may be available. The profile graphs should indicate the topography accurately for each radial, and the graphs should be plotted with the distance in kilometers as the abscissa and the elevation in meters above mean sea level as the ordinate. The profile graphs should indicate the source of the topographical data employed. The graph should also show the elevation of the center of the radiating system. The graph may be plotted either on rectangular coordinate paper or on special paper which shows the curvature of the earth. It is not necessary to take the curvature of the earth into consideration in this procedure, as this factor is taken care of in the charts showing signal strengths. The average elevation of the 12.9 kilometer (8 miles) distance between 3.2-16.1 kilometers (2-10 miles) from the antenna site should then be determined from the profile graph for each radial. This may be obtained by averaging a large number of equally spaced points, by using a planimeter, or by obtaining the median elevation (that exceeded for 50% of the distance) in sectors and averaging those values.

NOTE: The Commission will, upon a proper showing by an existing station that the application of this rule will result in an unreasonable power reduction in relation to other stations in close proximity, consider requests for adjustment in power on the basis of a common average terrain figure for the stations in question as determined by the FCC.

(e) In instance where it is desired to determine the area in square kilometers within the Grade A and Grade B field strength contours, the area may be determined from the coverage map by planimeter or other approximate means; in computing such areas, exclued (1) areas beyond the borders of the United States, and (2) large bodies of water, such as ocean areas, gulfs sounds, bays, large lakes, etc., but not rivers.

(f) In cases where terrain in one or more directions from the antenna site departs widely from the average elevation of the 3.2 to 16.1 kilometers (2 to 10 mile) sector, the prediction method may indicate contour distances that are different from what may be expected in practice. For example, a mountain ridge may indicate the practical limit of service although the prediction method may indicate otherwise. In such case the prediction method should be followed, but a supplemental showing may be made concerning the contour distances as determined by other means. Such supplemental showing should describe the procedure employed and should include sample calculations. Maps of predicted coverage should include both the coverage as predicted by the regular method and as predicted by a supplemental method. When measurements of area are required, these should include the area obtained by the regular predicted method and the area obtained by the supplemental method. In directions where the terrain is such that negative antenna heights or heights below 30.5 meters (100 feet) for the 3.2 to 16.1 kilometers (2 to 10 mile) sector are obtained, an assumed height of 30.5 meters (100 feet) shall be used for the prediction of coverage. However, where the actual contour distances are critical factors, a supplemental showing of expected coverage must be included together with a description of the method employed in predicting such coverage. In special cases, the Commission may require additional information as to terrain and coverage.

(g) In the preparation of the profile graph previously described, and in determining the location and height above sea level of the antenna site, the elevation or contour intervals shall be taken from the United States Geological Survey Topographic Quadrangle Maps, United States Army Corps of Engineers' maps or Tennessee Valley Authority maps, whichever is the latest, for all areas for which such maps are available. If such maps are not published for the area in question, the next best topographic information should be used. Topographic data may sometimes be obtained from State and Municipal agencies. Data from Sectional Aeronautical Charts (including bench marks) or railroad depot elevations and highway elevations from road maps may be used where no better information is available. In cases where limited topographic data is available, use may be made of an altimeter in a car driven along roads extending generally radially from the transmitter site. Ordinarily the Commission will not require the submission of topographical maps for areas beyond 24.1 kilometers (15 miles) from the antenna site, but the maps must include the principal community to be served. If it appears necessary, additional data may be requested. United States Geological Survey Topographic Quadrangle Maps may be obtained from the United States Geological Survey, Department of the Interior, Washington, DC 20240. Sectional Aeronautical Charts are available from the United States Coast and Geodetic Survey, Department of Commerce, Washington, DC 20235. In lieu of maps, the average terrain elevation may be computer generated, except in the cases of dispute, using elevations from a 30 second point or better topographic data file. The file must be identified and the data processed for intermediate points along each radial using linear interpolation techniques. The height above mean sea level of the antenna site must be obtained manually using appropriate topographic maps.

(h) The effect of terrain roughness on the predicted field strength of a signal at points distant from a television broadcast station is assumed to depend on the magnitude of a terrain roughness factor (Δh) which, for a specific propagation path, is determined by the characteristics of a segment of the terrain profile for that path 40.2 kilometers (25 miles) in length, located between 9.7 and 49.9 kilometers (6 and 31 miles) from the transmitter. The terrain roughness factor has a value equal to the difference, in meters, between elevations exceeded by all points on the profile for 10 percent and 90 percent, respectively, of the length of the profile segment (see § 73.699, Fig. 10d).

(i) If the lowest field strength value of interest is initially predicted to occur over a particular propagation path at a distance which is less than 49.9 kilometers (31 miles) from the transmitter, the terrain profile segment used in the determination of the terrain roughness factor over that path shall be that included between points 9.7 kilometers (6 miles) from the transmitter and such lesser distance. No terrain roughness correction need be applied when all field strength values of interest are predicted to occur 9.7 kilometers (6 miles) or less from the transmitter.

(j) Profile segments prepared for terrain roughness factor determinations should be plotted in rectangular coordinates, with no less than 50 points evenly spaced within the segment using data obtained from topographic maps, if available, with contour intervals of 15.2 meters (50 feet), or less.

(k) The field strength charts (§ 73.699, Figs. 9-10c) were developed assuming a terrain roughness factor of 50 meters, which is considered to be representative of average terrain in the United States. Where the roughness factor for a particular propagation path is found to depart appreciably from this value, a terrain roughness correction (**ΔF**) should be applied to field strength values along this path as predicted with the use of these charts. The magnitude and sign of this correction, for any value of Δ*h*, may be determined from a chart included in § 73.699 as Figure 10e, with linear interpolation as necessary, for the frequency of the UHF signal under consideration.

(l) Alternatively, the terrain roughness correction may be computed using the following formula:

$$\Delta F = C - 0.03(\Delta h)(1 + f/300)$$

Where:

ΔF=terrain roughness correction in dB
C=a constant having a specific value for use with each set of field strength charts:
  1.9 for TV Channels 2-6
  2.5 for TV Channels 7-13
  4.8 for TV Channels 14-69
Δh=terrain roughness factor in meters
f=frequency of signal in megahertz (MHz)

[28 FR 13660, Dec. 13, 1963, as amended at 40 FR 27683, July 1, 1975; 44 FR 36039, June 20, 1979; 48 FR 44807, Sept. 30, 1983; 50 FR 23699, June 5, 1985; 51 FR 26251, July 22, 1986; 52 FR 36879, Oct. 1, 1987]

EFFECTIVE DATE NOTE: In § 73.684 (k) and (l) are stayed indefinitely (see 42 FR 25736, May 19, 1977).

§ 73.685 Transmitter location and antenna system.

(a) The transmitter location shall be chosen so that, on the basis of the effective radiated power and antenna height above average terrain employed, the following minimum field strength in dB above one uV/m will be provided over the entire principal community to be served:

Channels 2-6	Channels 7-13	Channels 14-69
74 dBu	77 dBu	80 dBu

(b) Location of the antenna at a point of high elevation is necessary to reduce to a minimum the shadow effect on propagation due to hills and buildings which may reduce materially the strength of the station's signals. In general, the transmitting antenna of a station should be located at the most central point at the highest elevation available. To provide the best degree of service to an area, it is usually preferable to use a high antenna rather than a low antenna with increased transmitter power. The location should be so chosen that line-of-sight can be obtained from the antenna over the principal community to be served; in no event should there be a major obstruction in this path. The antenna must be constructed so that it is as clear as possible of surrounding buildings or objects that would cause shadow problems. It is recognized that topography, shape of the desired service area, and population distribution may make the choice of a transmitter location difficult. In such cases, consideration may be given to the use of a directional antenna system, although it is generally preferable to choose a site where a nondirectional antenna may be employed.

(c) In cases of questionable antenna locations it is desirable to conduct propagation tests to indicate the field strength expected in the principal community to be served and in other areas, particularly where severe shadow problems may be expected. In considering applications proposing the use of such locations, the Commission may require site tests to be made. Such tests should be made in accordance with the measurement procedure in § 73.686, and full data thereon must be supplied to the Commission. Test transmitters should employ an antenna having a height as close as possible to the proposed antenna height, using a balloon or other support if necessary and feasible. Information concerning the authorization of site tests may be obtained from the Commission upon request.

(d) Present information is not sufficiently complete to establish "blanket areas" of television broadcast stations. A "blanket area" is that area adjacent to a transmitter in which the reception of other stations is subject to interference due to the strong signal from this station. The authorization of station construction in areas where blanketing is found to be excessive will be on the basis that the applicant will assume full responsibility for the adjustment of reasonable complaints arising from excessively strong signals of the applicant's station or take other corrective action.

(e) An antenna designed or altered to produce a noncircular radiation pattern in the horizontal plane is considered to be a directional antenna. Antennas purposely installed in such a manner as to result in the mechanical beam tilting of the major vertical radiation lobe are included in this category. Directional antennas may be employed for the purpose of improving service upon an appropriate showing of need. Stations operating on Channels 2-13 will not be permitted to employ a directional antenna having a ratio of maximum to minimum radiation in the horizontal plane in excess of 10 dB. Stations operating on Channels 14-69 with transmitters delivering a peak visual power output of more than 1 kW may employ directive transmitting antennas with a maximum to minimum radiation in the horizontal plane of not more than 15 dB. Stations operating on Channels 14-69 and employing transmitters delivering a peak visual power output of 1 kW or less are not limited as to the ratio of maximum to minimum radiation.

(f) Applications proposing the use of directional antenna systems must be accompanied by the following:

(1) Complete description of the proposed antenna system, including the manufacturer and model number of the proposed directional antenna.

(2) Relative field horizontal plane pattern (horizontal polarization only) of the proposed directional antenna. A value of 1.0 should be used for the maximum radiation. The plot of the pattern should be oriented so that 0° corresponds to true North. Where mechanical beam tilt is intended, the amount of tilt in degrees of the antenna vertical axis and the orientation of the downward tilt with respect to true North must be specified, and the horizontal plane pattern must reflect the use of mechanical beam tilt.

(3) A tabulation of the relative field pattern required in paragraph (b)(2), of this section. The tabulation should use the same zero degree reference as the plotted pattern, and be tabulated at least every 10°. In addition, tabulated values of all maxima and minima with their corresponding azimuths should be submitted.

(4) Horizontal and vertical plane radiation patterns showing the effective radiated power, in dBk, for each direction. Sufficient vertical plane patterns must be included to indicate clearly the radiation characteristics of the antenna above and below the horizontal plane. In cases where the angles at which the maximum vertical radiation varies with azimuth, a separate vertical radiation pattern must be provided for each pertinent radial direction.

(5) All horizontal plane patterns must be plotted to the largest scale possible on unglazed letter-size polar coordinate paper (main engraving approximately 7" x 10") using only scale divisions and subdivisions of 1, 2, 2.5 or 5 times 10-nth. All vertical plane patterns must be plotted on unglazed letter-size rectangular coordinate paper. Values of field strength on any pattern less than 10% of the maximum field strength plotted on that pattern must be shown on an enlarged scale.

(6) The horizontal and vertical plane patterns that are required are the patterns for the complete directional antenna system. In the case of a composite antenna composed of two or more individual antennas, this means that the patterns for the composite antenna, not the patterns for each of the individual antennas, must be submitted.

(g) Applications proposing the use of television broadcast antennas within 61.0 meters (200 feet) of other television broadcast antennas operating on a channel within 20 percent in frequency of the proposed channel, or proposing the use of television broadcast antennas on Channels 5 or 6 within 61.0 meters (200 feet) of FM broadcast antennas, must include a showing as to the expected effect, if any, of such proximate operation.

(h) Where simultaneous use of antennas or antenna structures is proposed, the following provisions shall apply:

(1) In cases where it is proposed to use a tower of an AM broadcast station as a supporting structure for a television broadcast antenna, an appropriate application for changes in

the radiating system of the AM broadcast station must be filed by the licensee thereof. A formal application (FCC Form 301, or FCC Form 340 for a noncommercial educational station) will be required if the proposal involves substantial change in the physical height or radiation characteristics of the AM broadcast antennas; otherwise an informal application will be acceptable. (In case of doubt, an informal application (letter) together with complete engineering data should be submitted.) An application may be required for other classes of stations when the tower is to be used in connection with a television station.

(2) When the proposed TV antenna is to be mounted on a tower in the vicinity of an AM station directional antenna system and it appears that the operation of the directional antenna system may be affected, an engineering study must be filed with the TV application concerning the effect of the TV antenna on the AM directional radiation pattern. Field measurements of the AM stations may be required prior to and following construction of the TV station antenna, and readjustments made as necessary.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[28 FR 13660, Dec. 14, 1963, as amended at 35 FR 5693, Apr. 8, 1970; 40 FR 25461, June 16, 1975; 43 FR 53740, Nov. 17, 1978; 44 FR 22740, Apr. 17, 1979; 45 FR 26065, Apr. 17, 1980; 47 FR 35990, Aug. 18, 1982; 48 FR 21486, May 12, 1983; 50 FR 23701, June 5, 1985]

§ 73.686 Field strength measurements.

(a) Except as provided for in § 73.612, television broadcast stations shall not be protected from any type of interference or propagation effect. Persons desiring to submit testimony, evidence or data to the Commission for the purpose of showing that the technical standards contained in this subpart do not properly reflect the levels of any given type of interference or propagation effect may do so only in appropriate rulemaking proceedings concerning the amendment of such technical standards. Persons making field strength measurements for formal submission to the Commission in rulemaking proceedings, or making such measurements upon the request of the Commission, shall follow the procedure for making and reporting such measurements outlined in paragraph (b) of this section. In instances where a showing of the measured level of a signal prevailing over a specific community is appropriate, the procedure for making and reporting field strength measurements for this purpose is set forth in paragraph (c) of this section.

(b) Collection of field strength data for propagation analysis.

(1) *Preparation for measurements.* (i) On large scale topographic maps, eight or more radials are drawn from the transmitter location to the maximum distance at which measurements are to be made, with the angles included between adjacent radials of approximately equal size. Radials should be oriented so as to traverse representative types of terrain. The specific number of radials and their orientation should be such as to accomplish this objective.

(ii) At a point exactly 16.1 kilometers (10 miles) from the transmitter, each radial is marked, and at greater distances at successive 3.2 kilometer (2 mile) intervals. Where measurements are to be conducted at UHF, or over extremely rugged terrain, shorter intervals may be employed, but all such intervals shall be of equal length. Accessible roads intersecting each radial as nearly as possible at each 3.2 kilometer (2 mile) marker are selected. These intersections are the points on the radial at which measurements are to be made, and are referred to subsequently as measuring locations. The elevation of each measuring location should approach the elevation at the corresponding 3.2 kilometer (2 mile) marker as nearly as possible.

(2) *Measurement procedure.* The field strength of the visual carrier shall be measured with a voltmeter capable of indicating accurately the peak amplitude of the synchronizing signal. All measurements shall be made utilizing a receiving antenna designed for reception of the horizontally polarized signal component, elevated 9.1 meters (30 feet) above the roadbed. At each measuring location, the

following procedure shall be employed.

(i) The instrument calibration is checked.

(ii) The antenna is elevated to a height of 30 feet.

(iii) The receiving antenna is rotated to determine if the strongest signal is arriving from the direction of the transmitter.

(iv) The antenna is oriented so that the sector of its response pattern over which maximum gain is realized is in the direction of the transmitter.

(v) A mobile run of at least 30.5 meters (100 feet) is made, which is centered on the intersection of the radial and the road, and the measured field strength is continuously recorded on a chart recorder over the length of the run.

(vi) The actual measuring location is marked exactly on the topographic map, and a written record, keyed to the specific location, is made of all factors which may affect the recorded field, such as topography, height and types of vegetation, buildings, obstacles, weather, and other local features.

(vii) If, during the test conducted as described in paragraph (b)(2)(iii) of this section, the strongest signal is found to come from a direction other than from the transmitter, after the mobile run prescribed in paragraph (b)(2)(v) of this section is concluded, additional measurements shall be made in a "cluster" of at least five fixed points. At each such point, the field strengths with the antenna oriented toward the transmitter, and with the antenna oriented so as to receive the strongest field, are measured and recorded. Generally, all points should be within 61.0 meters (200 feet) of the center point of the mobile run.

(viii) If overhead obstacles preclude a mobile run of at leat 30.5 meters (100 feet), a "cluster" of five spot measurements may be made in lieu of this run. The first measurement in the cluster is identified. Generally, the locations for other measurements shall be within 61.0 meters (200 feet) of the location of the first.

(3) *Method of reporting measurements.* A report of measurements to the Commission shall be submitted in affidavit form, in triplicate, and should contain the following information:

(i) Tables of field strength measurements, which, for each measuring location, set forth the following data:

(A) Distance from the transmitting antenna.

(B) Ground elevation at measuring location.

(C) Date, time of day, and weather.

(D) Median field in dBu for 0 dBk for mobile run or for cluster, as well as maximum and minimum measured field strengths.

(E) Notes describing each measuring location.

(ii) U.S. Geological Survey topographic maps, on which is shown the exact location at which each measurement was made. The original plots shall be made on maps of the largest available scale. Copies may be reduced in size for convenient submission to the Commission, but not to the extent that important detail is lost. The original maps shall be made available, if requested. If a large number of maps is involved, an index map should be submitted.

(iii) All information necessary to determine the pertinent characteristics of the transmitting installation, including frequency, geographical coordinates of antenna site, rated and actual power output of transmitter, measured transmission line loss, antenna power gain, height of antenna above ground, above mean sea level, and above average terrain. The effective radiated power should be computed, and horizontal and vertical plane patterns of the transmitting antenna should be submitted.

(iv) A list of calibrated equipment used in the field strength survey, which, for each instrument, specifies its manufacturer, type, serial number and rated accuracy, and the date of its most recent calibration by the manufacturer, or by a laboratory. Complete details of any instrument not of standard manufacture shall be submitted.

(v) A detailed description of the calibration of the measuring equipment, including field strength meters, measuring antenna, and connecting cable.

(vi) Terrain profiles in each direction in which measurements were made, drawn on curved earth paper for equivalent 4/3 earth radius, of the largest available scale.

(c) Collection of field strength data to determine television service in specific communities.

(1) *Preparation for measurement.* (i) The population (P) of the community, and its suburbs, if any, is determined by reference to an appropriate source, e.g., the 1970 U.S. Census tables of population of cities and urbanized areas.

(ii) The number of locations at which measurements are to be made shall be at least 15, and shall be approximately equal to 0.1 (P) ½, if this product is a number greater than 15.

(iii) A rectangular grid, of such size and shape as to encompass the boundaries of the community is drawn on an accurate map of the community. The number of line intersections on the grid included within the boundaries of the community shall be at least equal to the required number of measuring locations. The position of each intersection on the community map determines the location at which a measurement shall be made.

(2) *Measurement procedure.* The field strength of the visual carrier shall be measured, with a voltmeter capable of indicating accurately the peak amplitude of the synchronizing signal. All measurements shall be made utilizing a receiving antenna designed for reception of the horizontally polarized signal component, elevated 9.1 meter (30 feet) above street level.

(i) Each measuring location shall be chosen as close as feasible to a point indicated on the map, as previously prepared, and at as nearly the same elevation as that point as possible.

(ii) At each measuring location, after equipment calibration and elevation of the antenna, a check is made to determine whether the strongest signal arrives from a direction other than from the transmitter.

(iii) At 20 percent or more of the measuring locations, mobile runs, as described in paragraph (b)(2) of this section shall be made, with no less than three such mobile runs in any case. The points at which mobile measurements are made shall be well separated. Spot measurements may be made at other measuring points.

(iv) Each actual measuring location is marked exactly on the map of the community, and suitably keyed. A written record shall be maintained, describing, for each location, factors which may affect the recorded field, such as the approximate time of measurement, weather, topography, overhead wiring, heights and types of vegetation, buildings and other structures. The orientation, with respect to the measuring location shall be indicated of objects of such shape and size as to be capable of causing shadows or reflections. If the strongest signal received was found to arrive from a direction other than that of the transmitter, this fact shall be recorded.

(3) *Method of reporting measurements.* A report of measurements to the Commission shall be submitted in affidavit form, in triplicate, and should contain the following information:

(i) A map of the community showing each actual measuring location, specifically identifying the points at which mobile runs were made.

(ii) A table keyed to the above map, showing the field strength at each measuring point, reduced to dBu for the actual effective radiated power of the station. Weather, date, and time of each measurement shall be indicated.

(iii) Notes describing each measuring location.

(iv) A topographic map of the largest available scale on which are marked the community and the transmitter site of the station whose signals have been measured, which includes all areas on or near the direct path of signal propagation.

(v) Computations of the mean and standard deviation of all measured field strengths, or a graph on which the distribution of measured field strength values is plotted.

(vi) A list of calibrated equipment used for the measurements, which for each instrument, specifies its manufacturer, type, serial number and rated accuracy, and the date of its most recent calibration by the manufacturer, or by a laboratory. Complete details of any instrument not of standard manufacture shall be submitted.

(vii) A detailed description of the procedure employed in the calibration of the measuring equipment, including field strength meters measuring antenna, and connecting cable.

[40 FR 27683, July 1, 1975, as amended at 50 FR 23701, June 5, 1985]

§ 73.687 Transmission system requirements.

(a) *Visual transmitter.* (1) The field strength or voltage of the lower sideband, as radiated or dissipated and measured as described in paragraph (a)(2) of this section, shall not be greater than −20 dB for a modulating frequency of 1.25 MHz or greater and in addition, for color, shall not be greater than −42 dB for a modulating frequency of 3.579545 MHz (the color subcarrier frequency). For both monochrome and color, the field strength or voltage of the upper sideband as radiated or dissipated and measured as described in paragraph (a)(2) of this section shall not be greater than −20 dB for a modulating frequency of 4.75 MHz or greater. For stations operating on Channels 15-69 and employing a transmitter delivering maximum peak visual power output of 1 kW or less, the field strength or voltage of the upper and lower sidebands, as radiated or dissipated and measured as described in paragraph (a)(2) of this section, shall depart from the visual amplitude characteristic (Figure 5a of § 73.699) by no more than the following amounts:

−2 dB at 0.5 MHz below visual carrier frequency;
−2 dB at 0.5 MHz above visual carrier frequency;
−2 dB at 1.25 MHz above visual carrier frequency;
−3 dB at 2.0 MHz above visual carrier frequency;
−6 dB at 3.0 MHz above visual carrier frequency;
−12 dB at 3.5 MHz above visual carrier frequency;
−8 dB at 3.58 MHz above visual carrier frequency (for color transmission only).

The field strength or voltage of the upper and lower sidebands, as radiated or dissipated and measured as described in paragraph (a)(2) of this section, shall not exceed a level of −20 dB for a modulating frequency of 4.75 MHz or greater. If interference to the reception of other stations is caused by out-of-channel lower sideband emission, the technical requirements applicable to stations operating on Channels 2-13 shall be met.

(2) The attenuation characteristics of a visual transmitter shall be measured by application of a modulating signal to the transmitter input terminals in place of the normal composite television video signal. The signal applied shall be a composite signal composed of a synchronizing signal to establish peak output voltage plus a variable frequency sine wave voltage occupying the interval between synchronizing pulses. (The "synchronizing signal" referred to in this section means either a standard synchronizing wave form or any pulse that will properly set the peak.) The axis of the sine wave in the composite signal observed in the output monitor shall be maintained at an amplitude 0.5 of the voltage at synchronizing peaks. The amplitude of the sine wave input shall be held at a constant value. This constant value should be such that at no modulating frequency does the maximum excursion of the sine wave, observed in the composite output signal monitor, exceed the value 0.75 of peak output voltage. The amplitude of the 200 kHz sideband shall be measured and designated zero dB as a basis for comparison. The modulation signal frequency shall then be varied over the desired range and the field strength or signal voltage of the corresponding sidebands measured. As an alternate method of measuring, in those cases in which the automatic d-c insertion can be replaced by manual control, the above characteristic may be taken by the use of a video sweep generator and without the use of pedestal synchronizing pulses. The d-c level shall be set for midcharacteristic operation.

(3) A sine wave, introduced at those terminals of the transmitter which are normally fed the composite color picture signal, shall produce a radiated signal having an envelope delay, relative to the average envelope delay between 0.05 and 0.20 MHz, of zero microseconds up to a frequency of 3.0 MHz; and then linearly decreasing to 4.18 MHz so as to be equal to −0.17

μsecs at 3.58 MHz. The tolerance on the envelope delay shall be ±0.05 μsecs at 3.58 MHz. The tolerance shall increase linearly to ±0.1 μsec down to 2.1 MHz, and remain at ±0.1 μsec down to 0.2 MHz. (Tolerances for the interval of 0.0 to 0.2 MHz are not specified at the present time.) The tolerance shall also increase linearly to ±0.1 μsec at 4.18 MHz.

(4) The radio frequency signal, as radiated, shall have an envelope as would be produced by a modulating signal in conformity with § 73.682 and Figure 6 or 7 of § 73.699, as modified by vestigial sideband operation specified in Figure 5 of § 73.699. For stations operating on Channels 15-69 the radio frequency signal as radiated, shall have an envelope as would be produced by a modulating signal in conformity with § 73.682 and Figure 6 or 7 of § 73.699.

(5) The time interval between the leading edges of successive horizontal pulses shall vary less than one half of one percent of the average interval. However, for color transmissions, § 73.682(a) (5) and (6) shall be controlling.

(6) The rate of change of the frequency of recurrence of the leading edges of the horizontal synchronizing signals shall be not greater than 0.15 percent per second, the frequency to be determined by an averaging process carried out over a period of not less than 20, nor more than 100 lines, such lines not to include any portion of the blanking interval. However, for color transmissions, § 73.682(a) (5) and (6) shall be controlling.

(b) *Aural transmitter.* (1) Pre-emphasis shall be employed as closely as practicable in accordance with the impedance-frequency characteristic of a series inductance-resistance network having a time constant of 75 microseconds. (See upper curve of Figure 12 § 73.699.)

(2) If a limiting or compression amplifier is employed, precaution should be maintained in its connection in the circuit due to the use of pre-emphasis in the transmitting system.

(3) Aural modulation levels are specified in § 73.1570.

(c) *Requirements applicable to both visual and aural transmitters.* (1) Automatic means shall be provided in the visual transmitter to maintain the carrier frequency within ±1 kHz of the authorized frequency; automatic means shall be provided in the aural transmitter to maintain the carrier frequency 4.5 MHz above the actual visual carrier frequency within ±1 kHz.

(2) The transmitters shall be equipped with suitable indicating instruments for the determination of operating power and with other instruments necessary for proper adjustment, operation, and maintenance of the equipment.

(3) Adequate provision shall be made for varying the output power of the transmitters to compensate for excessive variations in line voltage or for other factors affecting the output power.

(4) Adequate provisions shall be provided in all component parts to avoid overheating at the rated maximum output powers.

(d) The construction, installation, and operation of broadcast equipment is expected to conform with all applicable local, state, and federally imposed safety regulations and standards, enforcement of which is the responsibility of the issuing regulatory agency.

(e) *Operation.* (1) Spurious emissions, including radio frequency harmonics, shall be maintained at as low a level as the state of the art permits. As measured at the output terminals of the transmitter (including harmonic filters, if required) all emissions removed in frequency in excess of 3 MHz above or below the respective channel edge shall be attenuated no less than 60 dB. below the visual transmitted power. (The 60 dB. value for television transmitters specified in this rule should be considered as a temporary requirement which may be increased at a later date, especially when more higher-powered equipment is utilized. Stations should, therefore, give consideration to the installation of equipment with greater attenuation than 60 dB.) In the event of interference caused to any service greater attenuation will be required.

(2) If a limiting or compression amplifier is used in conjunction with the

aural transmitter, due operating precautions should be maintained because of pre-emphasis in the transmitting system.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[28 FR 13660, Dec. 14, 1963]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 73.687, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 73.688 Indicating instruments.

(a) Each TV broadcast station shall be equipped with indicating instruments which conform with the specifications described in § 73.1215 for measuring the operating parameters of the last radio stage of the visual transmitter, and with such other instruments as are necessary for the proper adjustment, operation, and maintenance of the visual transmitting system.

(b) The function of each instrument shall be clearly and permanently shown on the instrument itself or on the panel immediately adjacent thereto.

(c) In the event that any one of these indicating instruments becomes defective, when no substitute which conforms with the required specifications is available, the station may be operated without the defective instrument pending its repair or replacement for a period not in excess of 60 days without further authority of the FCC, provided that:

(1) If the defective instrument is the transmission line meter used for determining the output power by the direct method, the operating power shall be determined or maintained by the indirect method whenever possible or by using the operating parameters of the last radio stage of the transmitter during the time the station is operated without the transmission line meter.

(2) If conditions beyond the control of the licensee prevent the restoration of the meter to service within the above allowed period, informal request in accordance with § 73.3549 may be filed with the Engineer in Charge of the radio district in which the station is located for such additional time as may be required to complete repairs of the defective instrument.

[41 FR 36818, Sept. 1, 1976, as amended at 48 FR 38480, Aug. 24, 1983; 49 FR 50048, Dec. 26, 1984; 50 FR 26568, June 27, 1985]

§ 73.691 Visual modulation monitoring equipment.

Each TV station must have measuring equipment for determining that the transmitted visual signal conforms to the provisions of this subpart. The licensee shall decide the monitoring and measurement methods or procedures for indicating and controlling the visual signal.

[48 FR 36463, Aug. 11, 1983]

§ 73.698 Tables.

TABLE I—[RESERVED]

TABLE II

(1)—Channel	(2)—31.4 kilometers (19.5 miles) If beat	(3)—31.4 kilometers (19.5 miles) intermodulation	(4)—87.7 kilometers (54.5 miles) adjacent channel	(5)—95.7 kilometers (59.5 miles) oscillator	(6)—95.7 kilometers (59.5 miles) sound image	(7)—119 kilometr (74.5 miles pictur imag
14	22	16-19	15	21	28	29
15	23	17-20	14, 16	22	29	30
16	24	14, 18-21	15, 17	23	30	31
17	25	14-15, 19-22	16, 18	24	31	32
18	26	14-16, 20-23	17, 19	25	32	33
19	27	14-17, 21-24	18, 20	26	33	34
20	28	15-18, 22-25	19, 21	27	34	35
21	29	16-19, 23-26	20, 22	28, 14	35	36
22	30, 14	17-20, 24-27	21, 23	29, 15	36	37
23	31, 15	18-21, 25-28	22, 24	30, 16	37	38
24	32, 16	19-22, 26-29	23, 25	31, 17	38	39
25	33, 17	20-23, 27-30	24, 26	32, 18	39	40
26	34, 18	21-24, 28-31	25, 27	33, 19	40	41
27	35, 19	22-25, 29-32	26, 28	34, 20	41	42
28	36, 20	23-26, 30-33	27, 29	35, 21	42, 14	43

TABLE II—Continued

(1)—Channel	(2)—31.4 kilometers (19.5 miles) If beat	(3)—31.4 kilometers (19.5 miles) intermodulation	(4)—87.7 kilometers (54.5 miles) adjacent channel	(5)—95.7 kilometers (59.5 miles) oscillator	(6)—95.7 kilometers (59.5 miles) sound image	(7)—119.9 kilometers (74.5 miles) picture image
29	37, 21	24-27, 31-34	28, 30	36, 22	43, 15	44, 14
30	38, 22	25-28, 32-35	29, 31	37, 23	44, 16	45, 15
31	39, 23	26-29, 33-36	30, 32	38, 24	45, 17	46, 16
32	40, 24	27-30, 34-37	31, 33	39, 25	46, 18	47, 17
33	41, 25	28-31, 35-38	32, 34	40, 26	47, 19	48, 18
34	42, 26	29-32, 36-39	33, 35	41, 27	48, 20	49, 19
35	43, 27	30-33, 37-40	34, 36	42, 28	49, 21	50, 20
36	44, 28	31-34, 38-41	35, 37	43, 29	50, 22	51, 21
37	45, 29	32-35, 39-42	36, 38	44, 30	51, 23	52, 22
38	46, 30	33-36, 40-43	37, 39	45, 31	52, 24	53, 23
39	47, 31	34-37, 41-44	38, 40	46, 32	53, 25	54, 24
40	48, 32	35-38, 42-45	39, 41	47, 33	54, 26	55, 25
41	49, 33	36-39, 43-46	40, 42	48, 34	55, 27	56, 26
42	50, 34	37-40, 44-47	41, 43	49, 35	56, 28	57, 27
43	51, 35	38-41, 45-48	42, 44	50, 36	57, 29	58, 28
44	52, 36	39-42, 46-49	43, 45	51, 37	58, 30	59, 29
45	53, 37	40-43, 47-50	44, 46	52, 38	59, 31	60, 30
46	54, 38	41-44, 48-51	45, 47	53, 39	60, 32	61, 31
47	55, 39	42-45, 49-52	46, 48	54, 40	61, 33	62, 32
48	56, 40	43-46, 50-53	47, 49	55, 41	62, 34	63, 33
49	57, 41	44-47, 51-54	48, 50	56, 42	63, 35	64, 34
50	58, 42	45-48, 52-55	49, 51	57, 43	64, 36	65, 35
51	59, 43	46-49, 53-56	50, 52	58, 44	65, 37	66, 36
52	60, 44	47-50, 54-57	51, 53	59, 45	66, 38	67, 37
53	61, 45	48-51, 55-58	52, 54	60, 46	67, 39	68, 38
54	62, 46	49-52, 56-59	53, 55	61, 47	68, 40	69, 39
55	63, 47	50-53, 57-60	54, 56	62, 48	69, 41	70, 40
56	64, 48	51-54, 58-61	55, 57	63, 49	70, 42	71, 41
57	65, 49	52-55, 59-62	56, 58	64, 50	71, 43	72, 42
58	66, 50	53-56, 60-63	57, 59	65, 51	72, 44	73, 43
59	67, 51	54-57, 61-64	58, 60	66, 52	73, 45	74, 44
60	68, 52	55-58, 62-65	59, 61	67, 53	74, 46	75, 45
61	69, 53	56-59, 63-66	60, 62	68, 54	75, 47	76, 46
62	70, 54	57-60, 64-67	61, 63	69, 55	76, 48	77, 47
63	71, 55	58-61, 65-68	62, 64	70, 56	77, 49	78, 48
64	72, 56	59-62, 66-69	63, 65	71, 57	78, 50	79, 49
65	73, 57	60-63, 67-70	64, 66	72, 58	79, 51	80, 50
66	74, 58	61-64, 68-71	65, 67	73, 59	80, 52	81, 51
67	75, 59	62-65, 69-72	66, 68	74, 60	81, 53	82, 52
68	76, 60	63-66, 70-73	67, 69	75, 61	82, 54	83, 53
69	77, 61	64-67, 71-74	68, 70	76, 62	83, 55	54

NOTE: The parenthetical reference beneath the mileage figures in columns 2 through 7, inclusive, indicate, in abbreviated form, the bases for the required mileage separations. For a discussion of these bases, see the "Sixth Report and Order" of the Commission (FCC 52-294; 17 FR 3905, May 2, 1952). The hyphenated numbers listed in column (3) are both inclusive.

[28 FR 13660, Dec. 14, 1963, as amended at 39 FR 20377, June 10, 1974; 47 FR 35990, Aug. 18, 1982; 50 FR 23701, June 5, 1985; 54 FR 9807, Mar. 8, 1989]

§ 73.699 TV engineering charts.

This section consists of the following Figures 1-5, 5a, 6-10, 10a-10e, 11-12, 13-16.

NOTE: The charts as reproduced herein, due to their small scale, are not to be used in connection with material submitted to the F.C.C.

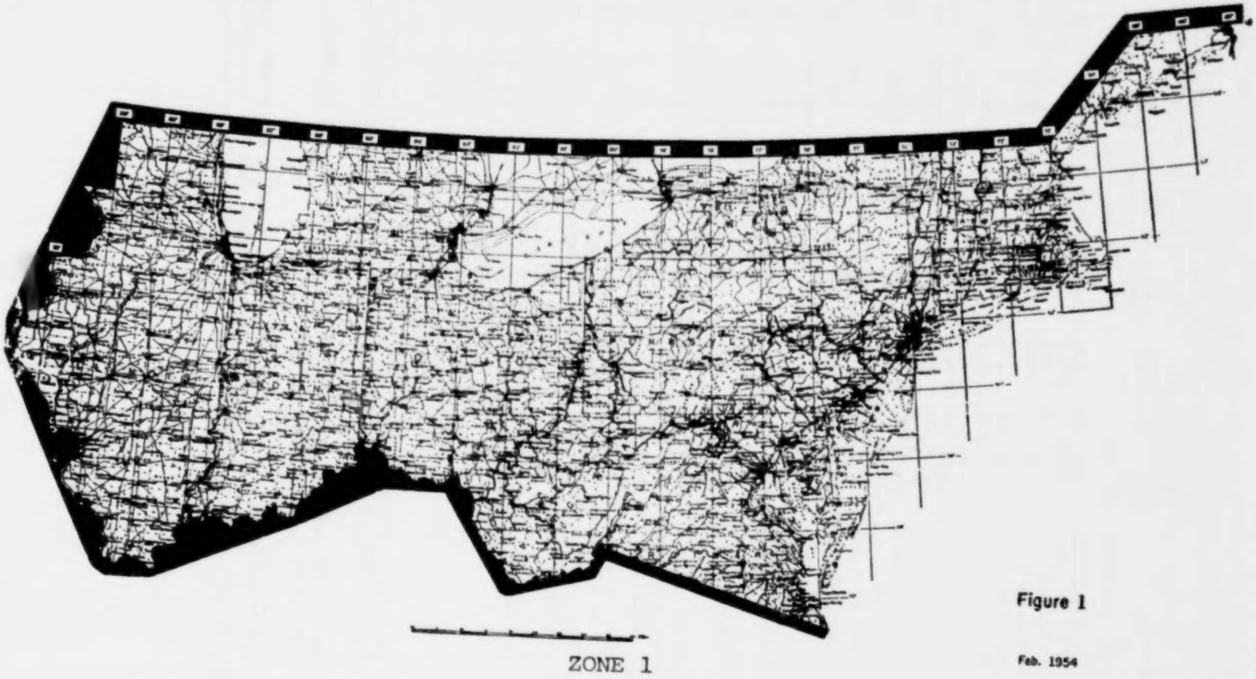
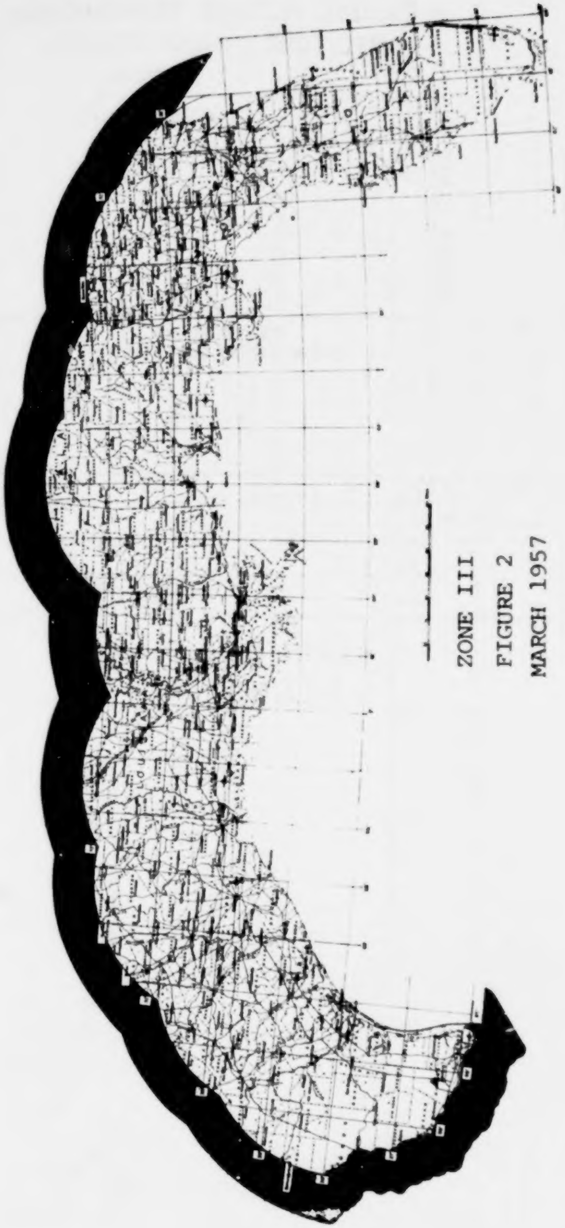
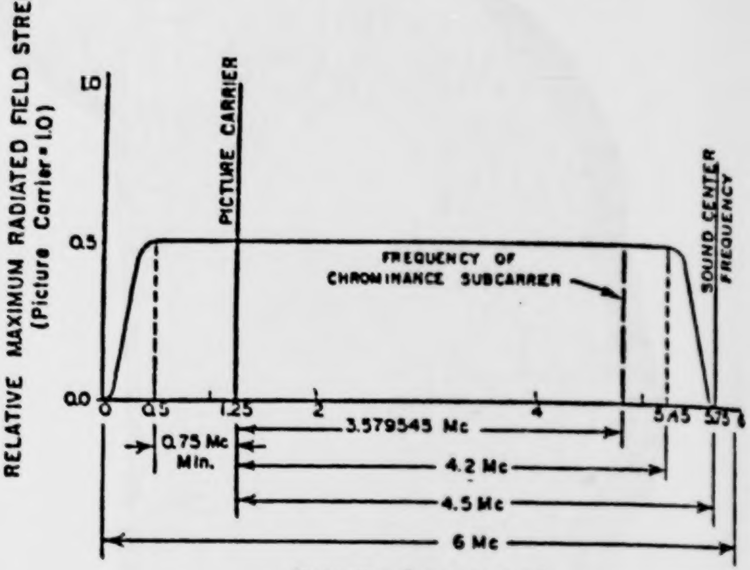


Figure 1

Feb. 1954



ZONE III
FIGURE 2
MARCH 1957



IDEALIZED PICTURE TRANSMISSION AMPLITUDE CHARACTERISTIC

Note: Not drawn to scale

FIGURE 5

IDEALIZED PICTURE TRANSMISSION AMPLITUDE CHARACTERISTIC

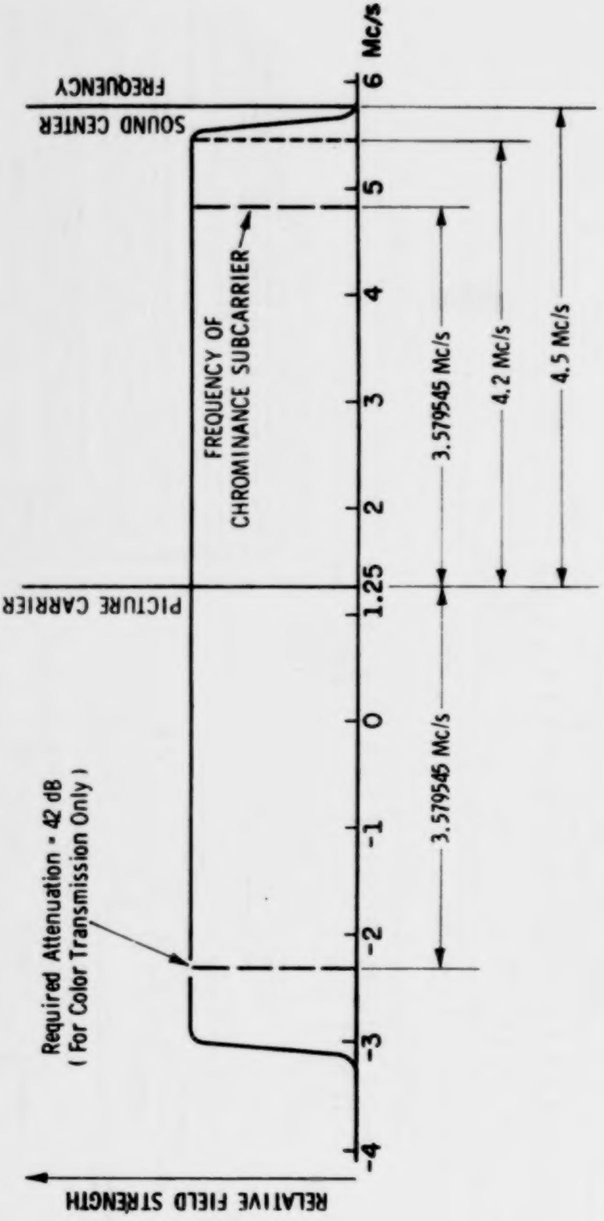
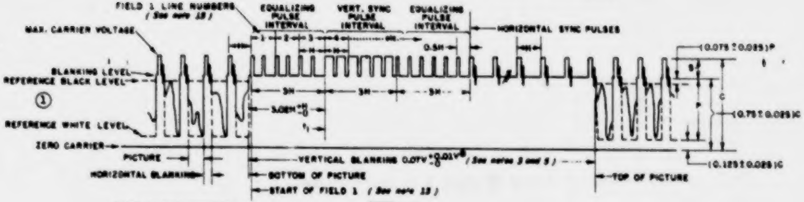
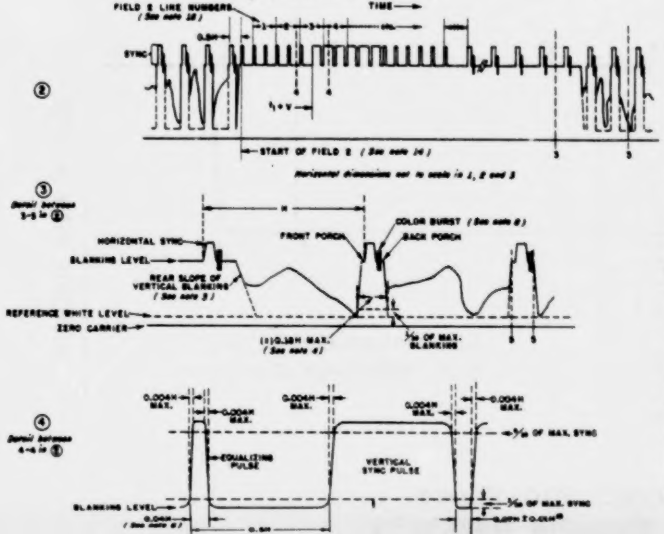

RELATIVE FIELD STRENGTH
Required Attenuation - 42 dB
(For Color Transmission Only)
PICTURE CARRIER
FREQUENCY OF
CHROMINANCE SUBCARRIER
SOUND CENTER
FREQUENCY
3.579545 Mc/s
3.579545 Mc/s
4.2 Mc/s
4.5 Mc/s
-4
-3
-2
-1
0
1.25
2
3
4
5
6 Mc/s

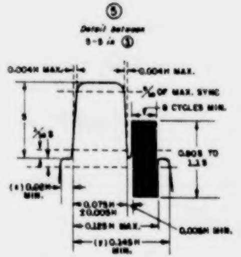
FIGURE 5(a)

TELEVISION SYNCHRONIZING WAVEFORM

FOR COLOR TRANSMISSION


①
FIELD 1 LINE NUMBERS (See note 15)
EQUALIZING PULSE INTERVAL
VERT. SYNC PULSE INTERVAL
EQUALIZING PULSE INTERVAL
HORIZONTAL SYNC PULSES
MAX. CARRIER VOLTAGE
BLANKING LEVEL
REFERENCE BLACK LEVEL
REFERENCE WHITE LEVEL
ZERO CARRIER
PICTURE
HORIZONTAL BLANKING
3H
3H
3H
0.5H
VERTICAL BLANKING 0.07V +0.01V* −0 (See notes 3 and 5)
BOTTOM OF PICTURE
START OF FIELD 1 (See note 13)
TOP OF PICTURE
(0.075 ± 0.025)P
(0.75 ± 0.025)C
(0.125 ± 0.025)C
TIME

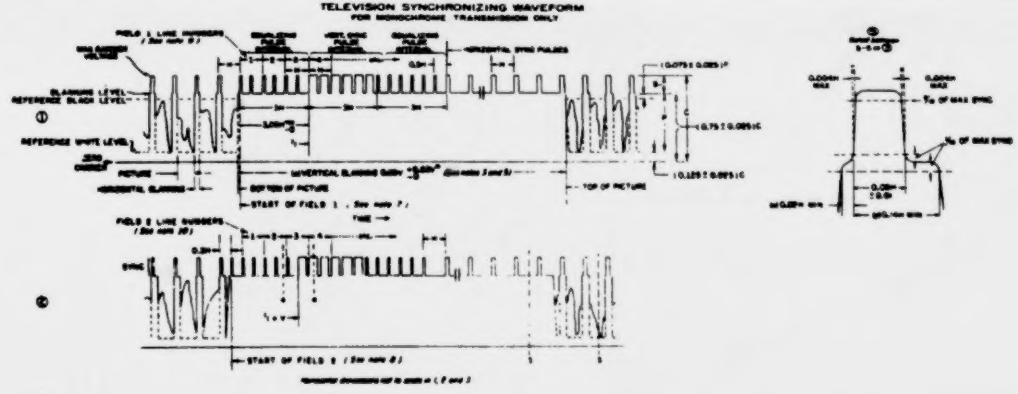

②
FIELD 2 LINE NUMBERS (See note 16)
SYNC
0.5H
$t_1 + V$
START OF FIELD 2 (See note 14)
Horizontal dimensions not to scale in 1, 2 and 3
③
Detail between 3-3 in ②
H
HORIZONTAL SYNC
BLANKING LEVEL
REAR SLOPE OF VERTICAL BLANKING (See note 3)
FRONT PORCH
COLOR BURST (See note 8)
BACK PORCH
REFERENCE WHITE LEVEL
ZERO CARRIER
(Z) 0.18H MAX. (See note 4)
1/10 OF MAX. BLANKING
④
Detail between 4-4 in ①
0.004H MAX.
0.004H MAX.
0.004H MAX.
0.004H MAX.
0.004H MAX.
EQUALIZING PULSE
VERTICAL SYNC PULSE
9/10 OF MAX. SYNC
1/10 OF MAX. SYNC
BLANKING LEVEL
0.5H

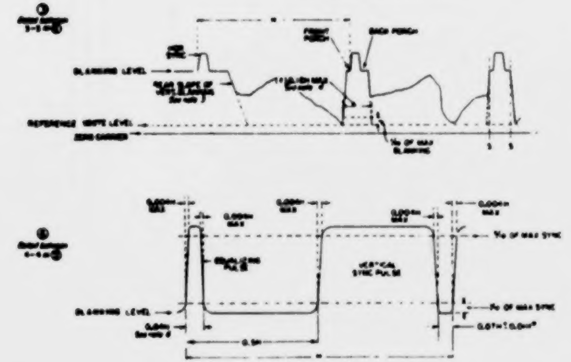

⑤
Detail between 5-5 in ③
0.004H MAX.
0.004H MAX.
1/10 OF MAX. SYNC
8 CYCLES MIN.
S
9/10 S
0.90S TO 1.1S
(X) 0.02H MIN.
0.075H ± 0.005H
0.125H MAX.
(Y) 0.145H MIN.
0.006H MIN.

NOTES

1. H = Time from start of one line to start of next line.
2. V = Time from start of one field to start of next field.
3. Leading and trailing edges of vertical blanking should be complete in less than 0.1H.
4. Leading and trailing slopes of horizontal blanking must be steep enough to preserve minimum and maximum values of (x + y) and (z) under all conditions of picture content.
*5. Dimensions marked with asterick indicate that tolerances given are permitted only for long time variations and not for successive cycles.
6. Equalizing pulse duration must be between 0.45 and 0.55 of the duration of the horizontal synchronizing pulse.
7. Color burst follows each horizontal pulse, but is omitted following the equalizing pulses and during the broad vertical pulses.
8. It is recommended that color bursts be omitted during monochrome transmission.
9. The burst frequency shall be 3.579545 MHz. The tolerance on the frequency shall be ± 10 Hz with a maximum rate of change of frequency not to exceed 1/10 Hz per second.
10. The horizontal scanning frequency shall be 2/455 times the burst frequency.
11. The dimensions specified for the burst determine the times of starting and stopping the burst, but not its phase. The color burst consists of amplitude modulation of a continuous sine wave.
12. Dimensions " P " represents the peak excursion of the luminance signal from blanking level, but does not include the chrominance signal. Dimension " S " is the sync amplitude above blanking level. Dimension " C " is the peak carrier amplitude.
13. Start of Field 1 is defined by a whole line between first equalizing pulse and preceding H sync pulses.
14. Start of Field 2 is defined by a half line between first equalizing pulse and preceding H sync pulses.
15. Field 1 line numbers start with first equalizing pulse in Field 1.
16. Field 2 line numbers start with second equalizing pulse in Field 2.
17. Refer to text for further explanations and tolerances.
18. During color transmissions, the chrominance component of the picture signal may penetrate the synchronizing region and the color burst penetrates the picture region.
19. Maximum horizontal and vertical blanking intervals are recommended values only.

TELEVISION SYNCHRONIZING WAVEFORM
FOR MONOCHROME TRANSMISSION ONLY


①
②
⑤
FIELD 1 LINE NUMBERS
BLANKING LEVEL
REFERENCE BLACK LEVEL
REFERENCE WHITE LEVEL
ZERO CARRIER
PICTURE
HORIZONTAL BLANKING
HORIZONTAL SYNC PULSES
3H
3H
3H
0.5H
H
BOTTOM OF PICTURE
START OF FIELD 1
TIME →
TOP OF PICTURE
FIELD 2 LINE NUMBERS
SYNC
0.5H
START OF FIELD 2
1/10 OF MAX SYNC


③
④
BLANKING LEVEL
FRONT PORCH
BACK PORCH
REFERENCE WHITE LEVEL
ZERO CARRIER
BLANKING LEVEL
EQUALIZING PULSE
VERTICAL SYNC PULSE
0.5H
H
1/10 OF MAX SYNC

NOTES

1 H Time from start of one line to start of next line
2 V Time from start of one field to start of next field
3 Leading and trailing edges of vertical blanking should be complete in less than 0.1H
4 Leading and trailing slopes of horizontal blanking must be steep enough to preserve minimum and maximum values of (x + y) and (z) under all conditions of picture content
*5 Dimensions marked with asterisk indicate that tolerances given are permitted only for long time variations and not for successive cycles
6 Equalizing pulse duration must be between 0.45 and 0.55 of the duration of the horizontal synchronizing pulse duration
7 Start of Field 1 is defined by a whole line between first equalizing pulse and preceding H sync pulses
8 Start of Field 2 is defined by a half line between first equalizing pulse and preceding H sync pulses
9 Field 1 line numbers start with first equalizing pulse in Field 1
10 Field 2 line numbers start with second equalizing pulse in Field 2
11 Refer to test for further explanations and tolerances
12 Maximum horizontal and vertical blanking intervals are recommended values only.

Figure 7

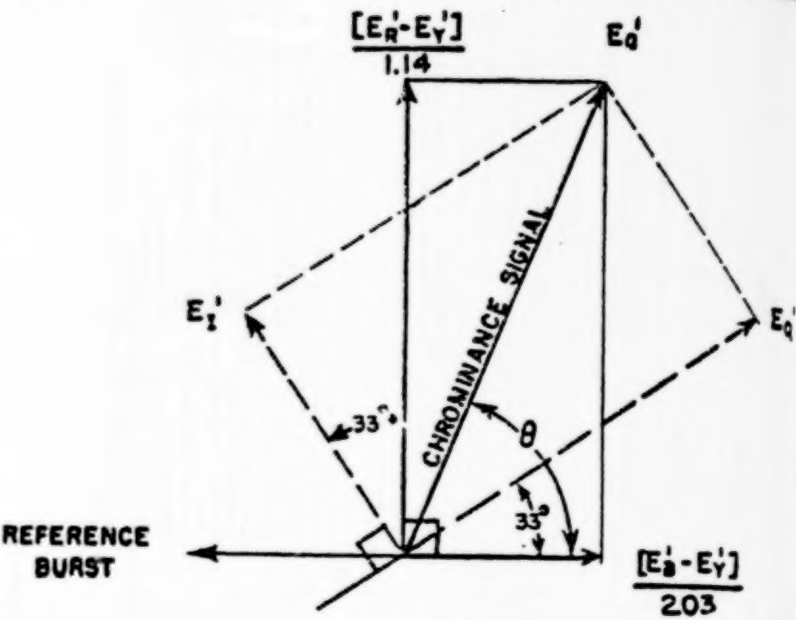
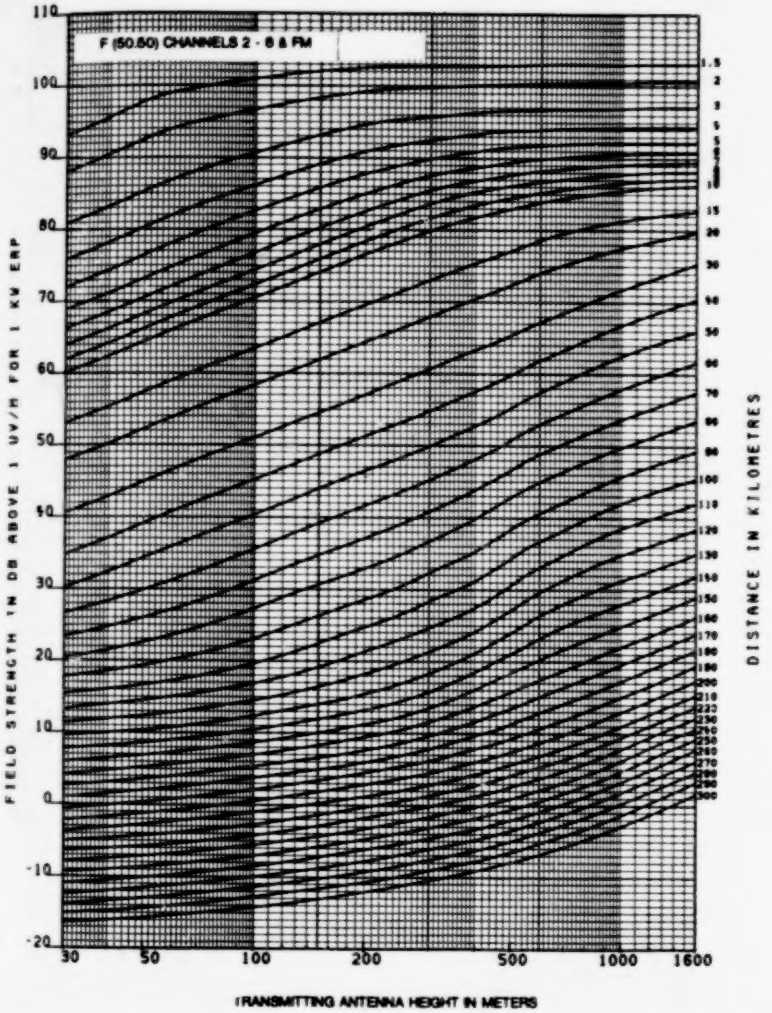
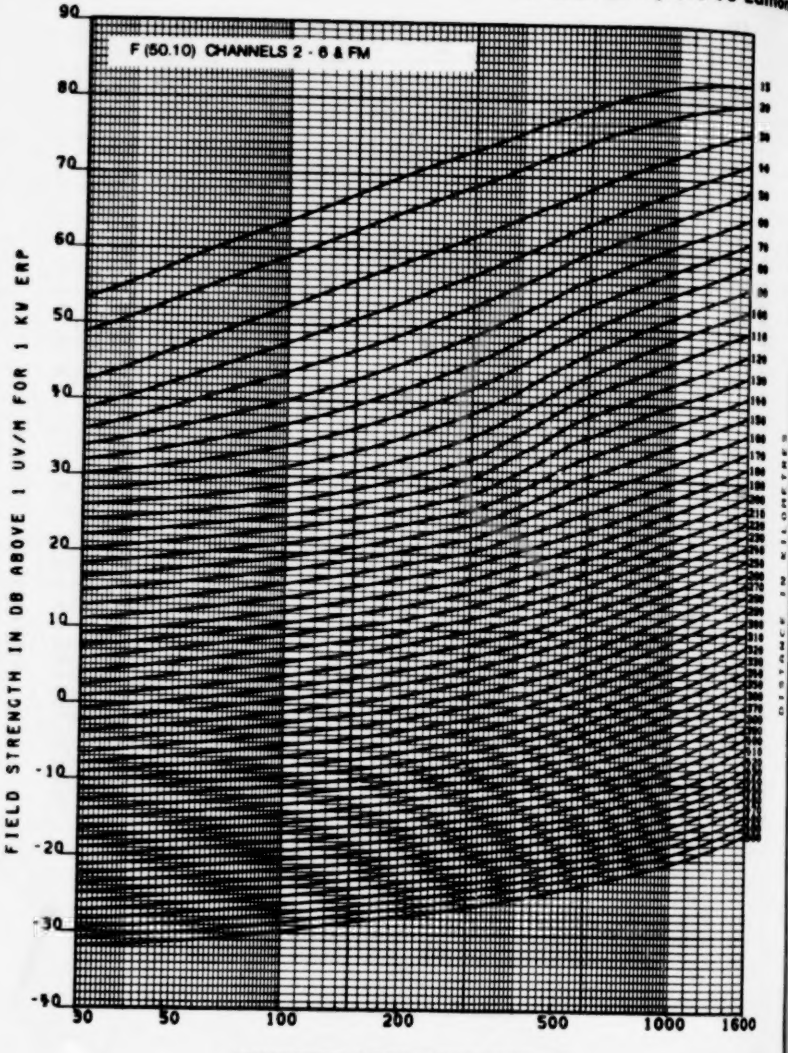

$\frac{[E_R' - E_Y']}{1.14}$
E_a'
E_I'
E_Q'
CHROMINANCE SIGNAL
33°
θ
33°
REFERENCE BURST
$\frac{[E_B' - E_Y']}{203}$

FIGURE 8



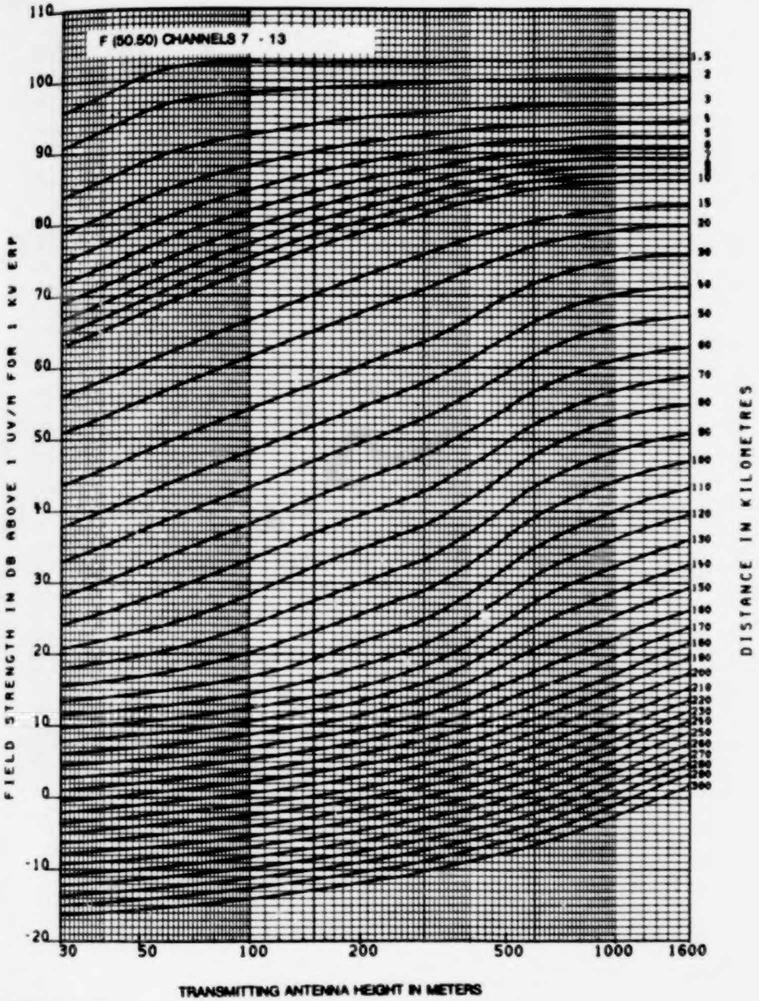
FCC 73.699 Figure 9

ESTIMATED FIELD STRENGTH EXCEEDED AT 50 PERCENT
OF THE POTENTIAL RECEIVER LOCATIONS FOR AT LEAST 50 PERCENT
OF THE TIME AT A RECEIVING ANTENNA HEIGHT OF 9 METERS



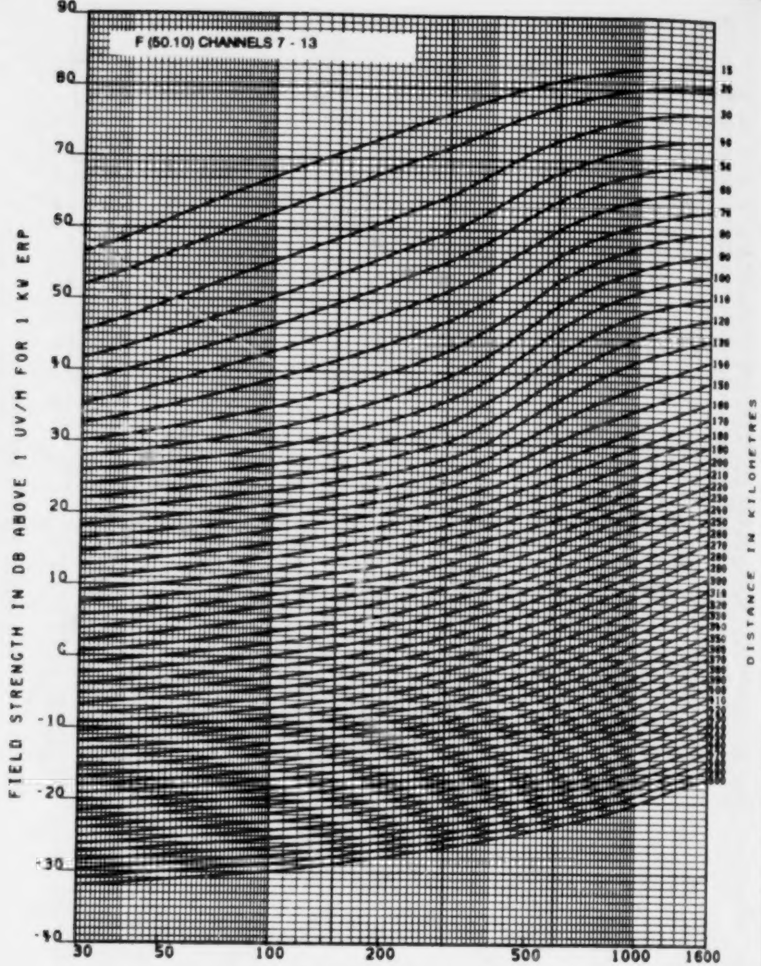
FCC 73.699 Figure 9a

ESTIMATED FIELD STRENGTH EXCEEDED AT 50 PERCENT
OF THE POTENTIAL RECEIVER LOCATIONS FOR AT LEAST 10 PERCENT
OF THE TIME AT A RECEIVING ANTENNA HEIGHT OF 9 METERS



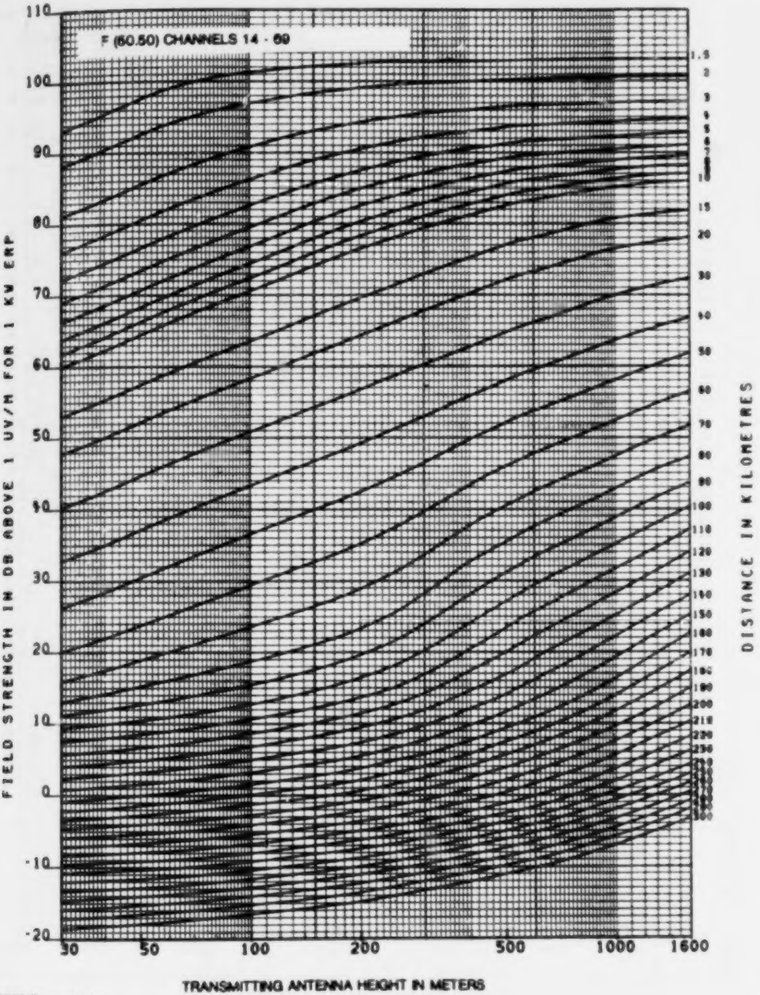
FCC 73.699 Figure 10

ESTIMATED FIELD STRENGTH EXCEEDED AT 50 PERCENT
OF THE POTENTIAL RECEIVER LOCATIONS FOR AT LEAST 50 PERCENT
OF THE TIME AT A RECEIVING ANTENNA HEIGHT OF 9 METERS



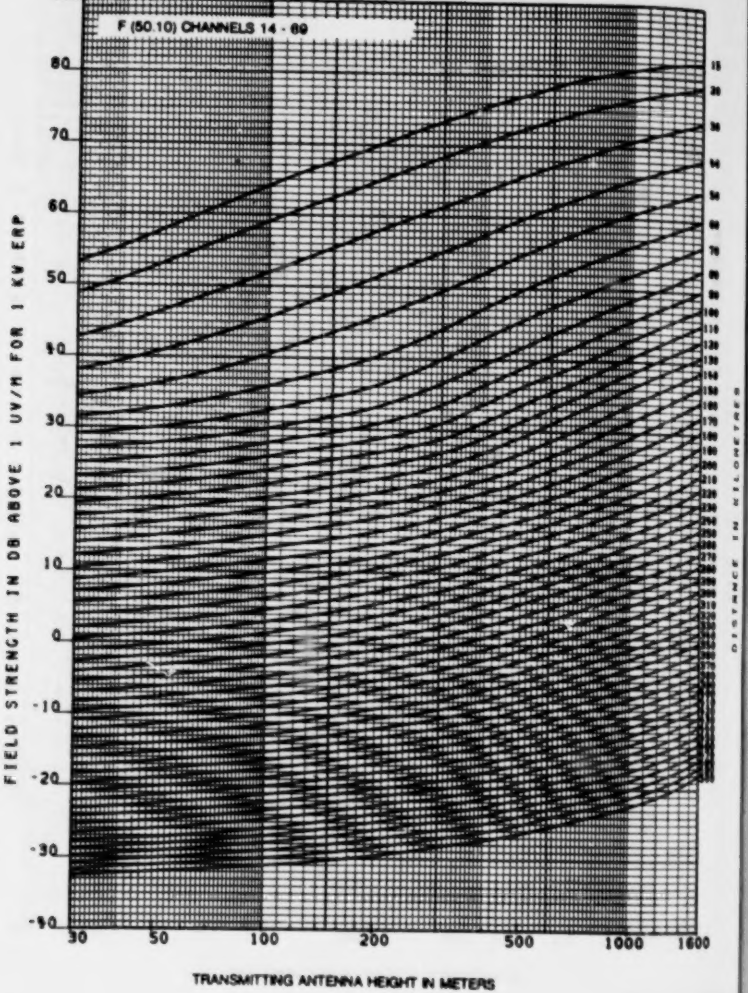
FCC 73.699 Figure 10a

ESTIMATED FIELD STRENGTH EXCEEDED AT 50 PERCENT
OF THE POTENTIAL RECEIVER LOCATIONS FOR AT LEAST 10 PERCENT
OF THE TIME AT A RECEIVING ANTENNA HEIGHT OF 9 METERS



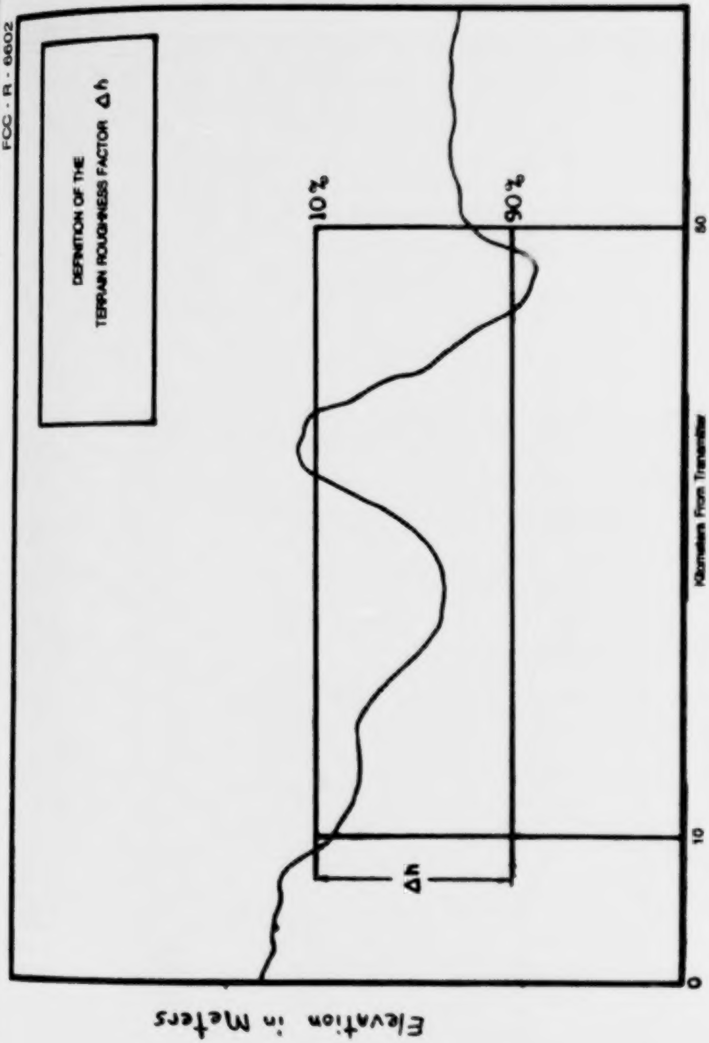
FCC 73.699 Figure 10b

ESTIMATED FIELD STRENGTH EXCEEDED AT 50 PERCENT
OF THE POTENTIAL RECEIVER LOCATIONS FOR AT LEAST 50 PERCENT
OF THE TIME AT A RECEIVING ANTENNA HEIGHT OF 9 METERS

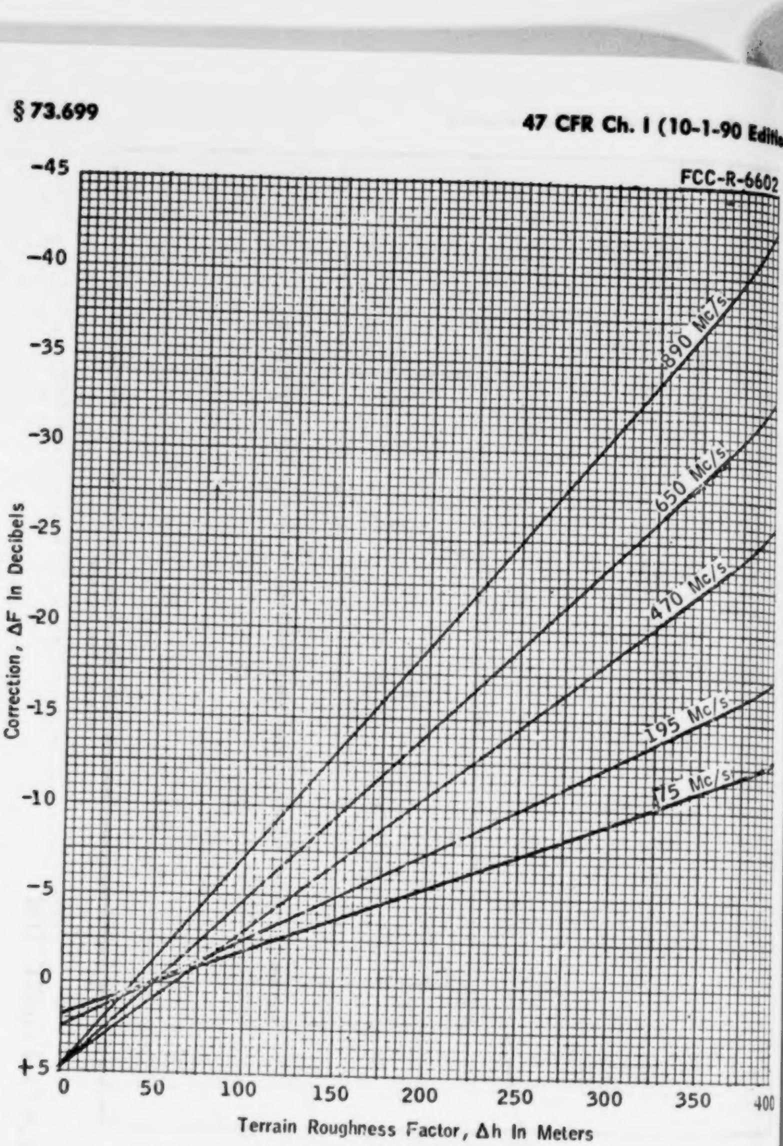


FCC 73.699 Figure 10c

ESTIMATED FIELD STRENGTH EXCEEDED AT 50 PERCENT
OF THE POTENTIAL RECEIVER LOCATIONS FOR AT LEAST 10 PERCENT
OF THE TIME AT A RECEIVING ANTENNA HEIGHT OF 9 METERS


FCC - R - 6602
DEFINITION OF THE
TERRAIN ROUGHNESS FACTOR Δh
10%
90%
Δh
0
10
50
Kilometers From Transmitter
Elevation in Meters

FCC §73.699 FIGURE 10d



TERRAIN ROUGHNESS CORRECTION
for use with estimated F(50,50) and F(50,10) field strength curves

FCC §73.699 FIGURE 10e

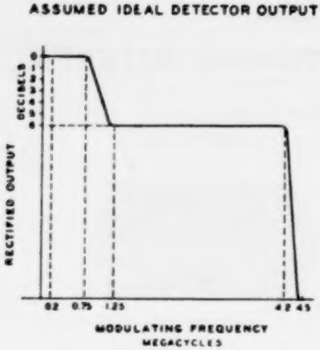


FIGURE 11

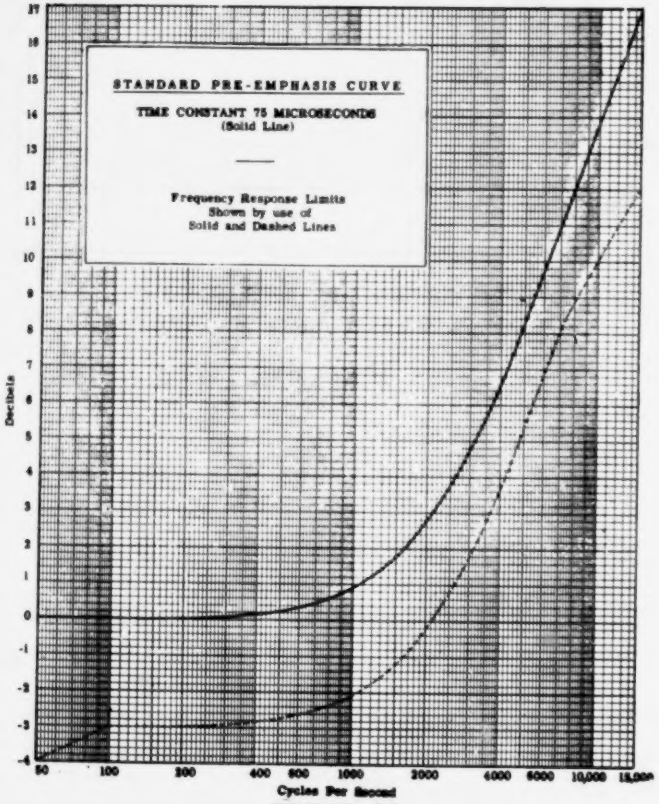
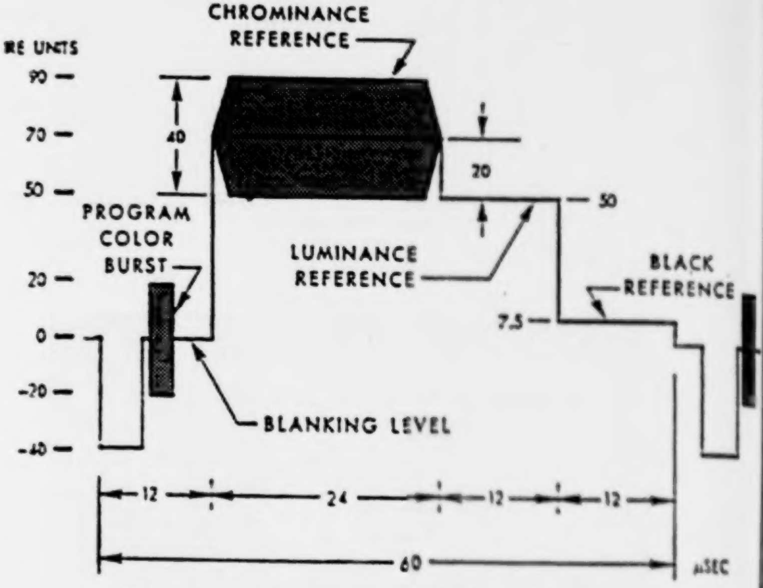


FIGURE 12

Figures 13 through 15 [Reserved]



VERTICAL INTERVAL REFERENCE (VIR) SIGNAL

CHROMINANCE REFERENCE
IRE UNITS
90
70
50
20
0
-20
-40
40
20
50
PROGRAM COLOR BURST
LUMINANCE REFERENCE
BLACK REFERENCE
7.5
BLANKING LEVEL
12
24
12
12
60
μSEC

NOTE: THE CHROMINANCE REFERENCE AND THE PROGRAM COLOR BURST HAVE THE SAME PHASE.

FIGURE 16

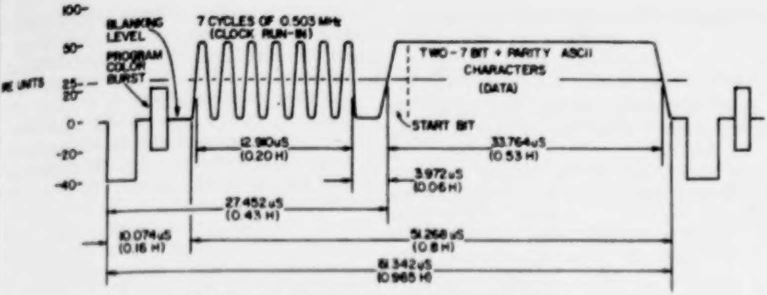

100
BLANKING LEVEL
7 CYCLES OF 0.503 MHz (CLOCK RUN-IN)
50
PROGRAM COLOR BURST
TWO - 7 BIT + PARITY ASCII CHARACTERS (DATA)
IRE UNITS
25
20
0
START BIT
-20
-40
12.910uS (0.20 H)
33.764uS (0.53 H)
3.972uS (0.06 H)
27.452uS (0.43 H)
10.074uS (0.16 H)
51.268uS (0.8 H)
61.342uS (0.965 H)

FIGURE 17 A LINE 21 FIELD 1 DATA SIGNAL FORMAT

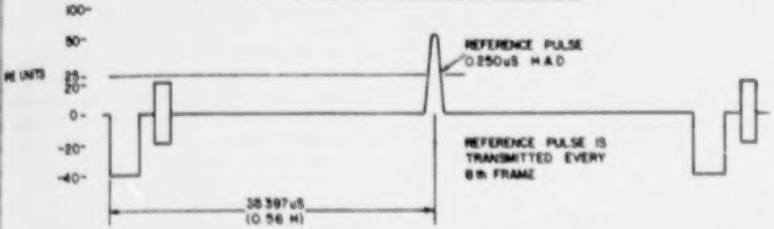

100
80
REFERENCE PULSE 0.250uS H.A.D.
IRE UNITS
25
20
0
-20
-40
REFERENCE PULSE IS TRANSMITTED EVERY 8th FRAME
35.397uS (0.56 H)

FIGURE 17 B ADAPTIVE EQUALIZER REFERENCE PULSE

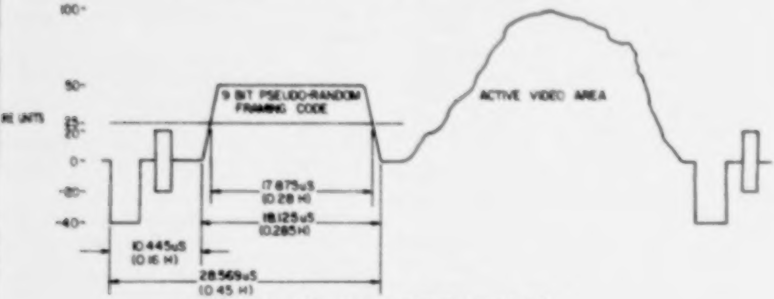

100
50
9 BIT PSEUDO-RANDOM FRAMING CODE
ACTIVE VIDEO AREA
IRE UNITS
25
20
0
-20
-40
17.875uS (0.28 H)
18.125uS (0.285 H)
10.445uS (0.16 H)
28.569uS (0.45 H)

FIGURE 17C LINE 21 FIELD TWO FRAMING CODE

1 DATA "1" = 50 IRE UNITS, DATA "0" = 0
2 DATA PULSE RISE TIME = 2T BAR RISE TIME
3 DATA TIME BASE = 32 f_H (0.503496503 MHz)
4 DATA BIT INTERVAL = H/32 (1.986 uS)
5 NEGATIVE GOING ZERO CROSSINGS OF CLOCK ARE COHERENT WITH DATA TRANSITIONS
6 DATA AND CLOCK RUN-IN COHERENT WITH H

HORIZONTAL DIMENSIONS NOT TO SCALE

FCC § 73.699, Figure 17

[28 FR 13660, Dec. 14, 1963, as amended at 36 FR 17429, Aug. 31, 1971; 39 FR 40957, Nov. 22, 1974; 40 FR 27684, July 1, 1975; 41 FR 56326, Dec. 28, 1976; 44 FR 36040, June 20, 1979; 47 FR 3790, Jan. 27, 1982; 47 FR 35990, Aug. 18, 1982; 50 FR 13972, Apr. 9, 1985; 50 FR 23701, June 5, 1985; 50 FR 32205, Aug. 9, 1985; 52 FR 11656, Apr. 10, 1987; 54 FR 9807, Mar. 8, 1989]

EFFECTIVE DATE NOTE: At 42 FR 25736, May 19, 1977, the effective date of § 73.699 Figure 16e was stayed indefinitely.

Subpart F—International Broadcast Stations

§ 73.701 Definitions.

The following definitions apply to terminology employed in this subpart:

(a) *International broadcasting stations.* A broadcasting station employing frequencies allocated to the broadcasting service between 5,950 and 26,100 kHz, the transmissions of which are intended to be received directly by the general public in foreign countries. (A station may be authorized more than one transmitter.) There are both government and non-government international broadcasting stations; only the latter are licensed by the Commission and are subject to the rules of this subpart.

(b) *Transmitter-hour.* One frequency used on one transmitter for one hour.

(c) *Frequency-hour.* One frequency used for one hour regardless of the number of transmitters over which it is simultaneously broadcast by a station during that hour.

(d) *Multiple operation.* Broadcasting by a station on one frequency over two or more transmitters simultaneously. If a station uses the same frequency simultaneously on each of two (three, etc.) transmitters for an hour, it uses one frequency-hour and two (three, etc.) transmitter-hours.

(e) *Day.* Any twenty-four hour period beginning 0100 g.m.t. and ending 0100 g.m.t.

(f) *Sunspot number.* The 12-month running average of the number of sunspots for any month as indicated in the U.S. Department of Commerce Telecommunications Research and Engineering Report No. 13—available from the Superintendent of Documents, Washington, DC 20402. The sunspot number varies in an approximate 11-year cycle.

(g) *March season.* That portion of any year commencing 0100 g.m.t. on the first Sunday in March and ending at 0100 g.m.t. on the first Sunday in May.

(h) *May season.* That portion of any year commencing at 0100 G.M.T. on the first Sunday in May and ending at 0100 g.m.t. on the first Sunday in September.

(i) *September season.* That portio of any year commencing at 0100 g.m. on the first Sunday in September an ending at 0100 g.m.t. on the firs Sunday in November.

(j) *November season.* That portion any year commencing at 0100 g.m.t. the first Sunday in November an ending at 0100 g.m.t. on the firs Sunday in March.

(k) *Seasonal schedule.* An assig ment, for a season, of a frequency frequencies, and other technical pa rameters, to be used by a station fo transmission to particular zones areas of reception during specifie hours.

(l) *Reference month.* That month a season which is used for determinin predicted propagation characteristi for the season. The reference month January, April, July, or October, as lated to the season in which it occur

(m) *Maximum usable frequen (MUF).* The highest frequency whic is returned by ionospheric radio pro agation to the surface of the earth fo a particular path and time of day fo 50 percent of the days of the referen month.

(n) *Optimum working frequen (FOT).* The highest frequency which returned by ionospheric radio propa gation to the surface of the earth for particular path and time of day for percent of the days of the referen month.

NOTE: The international abbreviation optimum working frequency, FOT, formed with the initial letters of the Fren words for "optimum working frequen which are "frequence optimum de travail"

(o) *Zone of reception.* Any geogra ic zone indicated in § 73.703 in whic the reception of particular programs specifically intended and in whic broadcast coverage is contemplated

(p) *Area of reception.* Any geogra ic area smaller than a zone of rece tion in which the reception of partic lar programs is specifically intende and in which broadcast coverage contemplated, such areas being ind cated by countries or parts of cou tries.

(q) *Delivered median field stren or field strength.* The field strength cident upon the zone or area of rece tion expressed in microvolts per meter, or decibels above one microvolt per meter, which is exceeded by the hourly median value for 50 percent of the days of the reference month.

(r) *Carrier power*. The average power supplied to the antenna transmission line by a transmitter during one radio frequency cycle under conditions of no modulation.

[38 FR 18892, July 16, 1973]

§ 73.702 Assignment and use of frequencies.

(a) Frequencies will be assigned by the Commission prior to the start of each season to authorized international broadcasting stations for use during the season at specified hours and for transmission to specified zones or areas of reception, with specified power and antenna bearing. Six months prior to the start of each season, licensees and permittees shall by informal written request, submitted to the Commission in triplicate, indicate for the season the frequency or frequencies desired for transmission to each zone or area of reception specified in the license or permit, the specific hours during which it desires to transmit to such zones or areas on each frequency, and the power, antenna gain, and antenna bearing it desires to use. Requests will be honored to the extent that interference and propagation conditions permit and that they are otherwise in accordance with the provisions of this section.

(b) After necessary processing of the requests required by paragraph (a) of this section, the Commission will notify each licensee and permittee of the frequencies, hours of use thereof to specified zones or areas of reception, power, and antenna bearing which it intends to authorize for the season in question. After receipt of such notification, the licensee or permittee shall, in writing, not later than two months before the start of the season in question, inform the Commission either that it plans to operate in accordance with the authorization which the Commission intends to issue, or that it plans to operate in another manner. If the licensee or permittee indicates that it plans to operate in another manner, it shall furnish explanatory details.

(c) If after submitting the request required under the provisions of paragraph (a) of this section, but before receipt of the Commission's notification referred to in paragraph (b) of this section, the licensee or permittee submits a request for changes of its original request, such requests will be accepted for consideration only if accompanied by statements showing good cause therefor and will be honored only if conditions permit. If the information required to be submitted by the licensee or permittee under the provisions of paragraph (b) of this section indicates that operation in another manner is contemplated, and the explanatory details contain a request for change in the originally proposed manner of operation, such requests will be accepted for consideration only if accompanied by statements showing good cause therefor and will be honored only if conditions permit. If after the licensee or permittee submits the information required under the provisions of paragraph (b) of this section, but before the start of the season in question, the licensee or permittee submits a request for changes in its manner of operation for the season in question, the request will be accepted for consideration only if accompanied by statements showing good cause therefor and will be honored only if conditions permit. If after the start of a season the licensee or permittee submits a request for changes in the manner of operation as authorized, the request will be considered only if accompanied by statements showing good cause therefor, and will be honored only if conditions permit.

(d) The provisions of paragraphs (a), (b), and (c) of the section shall apply to licensees, to permittees operating under program test authority, and to permittees who anticipate applying for and receiving program test authority for operation during the specified season.

NOTE: Permittees who during the process of construction wish to engage in equipment tests shall by informal written request, submitted to the Commission in triplicate not less than 30 days before they desire to begin such testing, indicate the frequencies they desire to use for testing and the hours they desire to use those frequencies. No equipment testing shall occur until the Commission has authorized frequencies and hours for such testing. Such authorizations shall be only for one season, and if it is desired to continue equipment testing in a following season, new requests for frequencies and hours must be submitted at least 30 days before it is desired to begin testing in the following season.

(e) Within 14 days after the end of each season, a report shall be filed with the Commission by each licensee or permittee operating under program test authority who has been issued a seasonal schedule for that season. The report shall state whether the licensee or permittee has operated the number of frequency-hours authorized by the seasonal schedule to each of the zones or areas of reception specified in the schedule. If such operation has not occurred, a detailed explanation of that fact shall also be submitted which includes specific dates, frequency-hours not used, and reasons for the failure to operate as authorized. The report shall also contain information that has been received by the licensee or permittee as to reception or interference, and conclusions with regard to propagation characteristics of frequencies that were assigned for the season in question.

(f) Frequencies assigned by the FCC shall be within the following bands which are allocated exclusively to the international broadcast service:

(1) 5,950-6,200 kHz; 9,500-9,775 kHz; 11,700-11,975 kHz; 15,100-15,450 kHz; 17,700-17,900 kHz; 21,450-21,750 kHz; 25,600-26,100 kHz.

(2) In addition, the following band is allocated exclusively to the international broadcast service in Region 3:

7,100-7,300 kHz. Assignments in this frequency band will be limited to international broadcast stations located in the area designated as Region 3 by No. 395 of the International Radio Regulations and authorized only to transmit to zones and areas of reception situated outside Region 2 as defined in No. 394 of the International Radio Regulations. In addition, during the hours of 0800-1600 UTC (Coordinated Universal Time) antenna gain with reference to an isotropic radiator in any easterly direction that would intersect any area in Region 2 shall not exceed 2.15 dBi, except in the case where a transmitter power of less than 100 kW is used. In this case, antenna gain on restricted azimuths shall not exceed that which is determined in accordance with equation below. Stations desiring to operate in this band must submit sufficient antenna performance information to ensure compliance with these restrictions. Permitted Gain for Transmitter powers less than 100 kW:

$$Gi = 2.15 + 10 \log \left(\frac{100}{Pa} \right) \text{dBi}$$

Where:

Gi = maximum gain permitted with reference to an isotropic radiator.

Pa = Transmitter power employed in kW.

(3) The carrier frequencies assignable shall begin 5 kHz above the frequency specified above for the beginning of each band and shall be in sucessive steps of 5 kHz to and including 5 kHz below the frequency specified as the end of each band.

(g) Frequencies requested for assignment must be as near as practicable to the optimum working frequency (unless otherwise justified) for the zone or area of reception for the period and path of transmission, and should be chosen so that a given frequency will provide the largest period of reliable transmission to the selected zone or area of reception. Moreover, at the zone or area of reception frequencies shall provide protection to the transmissions of other broadcasting stations which, in the opinion of the Commission, have priority of assignment.

NOTE 1: Requests for frequency-hours shall be accompanied by all pertinent technical data with reference to the frequencies and hours of operation, including calculated field strengths delivered to the zones or areas of reception.

NOTE 2: It is preferable that calculated field strengths delivered to zones or areas of reception be equal to or greater than those required by I.F.R.B. Technical Standards Series A (and supplements thereto), in order for the I.F.R.B. to afford the notified s signment protection from interference. Nevertheless, calculated field strengths less than those required by the I.F.R.B. standards for protection will be acceptable to the Commission. However, licensees should note that if such lesser field strengths are submitted no protection from interference will be provided by the I.F.R.B. if their technical examination of such notifications show incompatibilities with other notified assignments fully complying with I.F.R.B. technical standards.

NOTE 3: Licensees are permitted to engage in multiple operation as defined in § 73.701(d).

NOTE 4: Seasonal requests for frequency-hours will be only for transmissions to zones or areas of reception specified in the basic instrument of authorization. Changes in such zones or areas will be made only on separate application for modification of such instruments.

(h) Not more than one frequency will be assigned for use at any one time for any one program transmission except in instances where a program is intended for reception in more than one zone or area of reception and the intended zones or areas cannot be served by a single frequency: *Provided, however,* That on a showing of good cause a licensee may be authorized to operate on more than one frequency at any one time to transmit any one program to a single zone or area of reception.

(i) Any frequency assigned to a licensee or permittee shall also be available for assignment to other licensees or permittees.

(j) All assignments of frequencies and the hours during which they will be used will be made with the express understanding that they are subject to immediate cancellation or change without hearing whenever the Commission determines that interference or propagation conditions so require and that each frequency-hour assignment for a given seasonal schedule is unique unto itself and not necessarily available for use during a subsequent season.

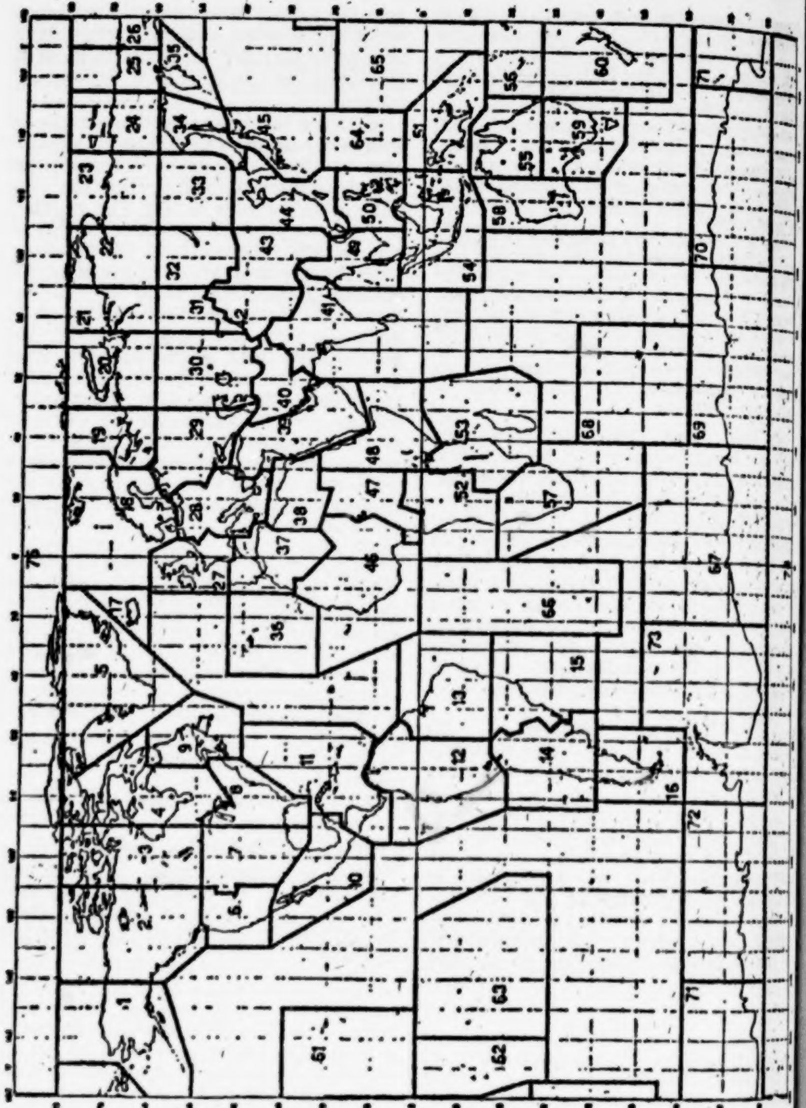
(k) The total maximum number of frequency-hours which will be authorized to all licensees of international broadcasting stations during any one day for any season is 100. The number of frequency-hours allocated to any licensee will depend on past usage, availability, and need. If for a forthcoming season the total of the requests for daily frequency-hours of all licensees exceeds 100, all licensees will be notified and each licensee that makes an adequate showing that good cause exists for not having its requested number of frequency-hours reduced and that operation of its station without such reduction would be consistent with the public interest may be authorized the frequency-hours requested.

NOTE: The provisions of this paragraph are not to be construed to mean that a total of 100 (or more) frequency-hours per day is assured licensees. Frequency-hours will only be assigned to the extent that they are available. It is the responsibility of each licensee to make all technical studies to show that frequency-hours requested by it are available and suitable for use as proposed.

[38 FR 18892, July 16, 1973, as amended at 51 FR 9965, Mar. 24, 1986]

§ 73.703 Geographical zones and areas of reception.

The zones or areas of reception to be served by international broadcasting stations shall be based on the following map, and directive antennas shall be employed to direct transmissions thereto: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[38 FR 18893, July 16, 1973]

§ 73.712 Equipment tests.

(a) During the process of construction of an international broadcasting station, the permittee, having obtained authorization for frequencies and hours as set forth in the Note to § 73.702(d) may, without further authority of the FCC, conduct equipment tests for the purpose of such adjustments and measurements as may be necessary to assure compliance with the terms of the construction permit, the technical provisions of the application therefor and the rules and regulations. Such tests shall use voice identification and test tones only. No programming shall be conducted during equipment tests.

(b) The Commission may notify the permittee to conduct no tests or may cancel, suspend, or change the date for the beginning of equipment tests when and if such action may appear to be in the public interest, convenience, and necessity.

(c) Equipment tests may be continued so long as the construction permit shall remain valid: *Provided, however*, That the procedure set forth in paragraph (a) of this section must be repeated prior to the conducting of such tests in each season after the season in which the testing began.

(d) The authorization for tests embodied in this section shall not be construed as constituting a license to operate but as a necessary part of construction.

[28 FR 13696, Dec. 14, 1963, as amended at 37 FR 25842, Dec. 5, 1972. Redesignated and amended at 38 FR 18894, July 16, 1973; 47 FR 40174, Sept. 13, 1982]

§ 73.713 Program tests.

(a) Upon completion of construction of an international broadcasting station in accordance with the terms of the construction permit, the technical provisions of the application therefor, and the rules and regulations and the applicable engineering standards, and when an application for station license has been filed showing the station to be in satisfactory operating condition, the permittee may request authority to conduct program tests. Such request shall be filed with the FCC at least 10 days prior to the date on which it is desired to begin such operation. All data necessary to show compliance with the terms and conditions of the construction permit must be filed with the license application.

(b) Program tests shall not commence until specific Commission authority is received. The Commission reserves the right to change the date of the beginning of such tests or to suspend or revoke the authority for program tests as and when such action may appear to be in the public interest, convenience, and necessity.

(c) Unless sooner suspended or revoked, program test authority continues valid during Commission consideration of the application for license and during this period further extension of the construction permit is not required. Program test authority shall be automatically terminated by final determination upon the application for station license.

(d) All operation under program test authority shall be in strict compliance with the rules governing international broadcasting stations and in strict accordance with representations made in the application for license pursuant to which the tests were authorized.

(e) The granting of program test authority shall not be construed as approval by the Commission of the application for station license.

[38 FR 18894, July 16, 1973, as amended at 47 FR 40174, Sept. 13, 1982]

§ 73.731 Licensing requirements.

(a) A license for an international broadcasting station will be issued only after a satisfactory showing has been made in regard to the following, among others:

(1) That there is a need for the international broadcasting service proposed to be rendered.

(2) That the necessary program sources are available to the applicant to render the international service proposed.

(3) That the production of the program service and the technical operation of the proposed station will be conducted by qualified persons.

(4) That the applicant is legally, technically and financially qualified and possesses adequate technical fa-

cilities to carry forward the service proposed.

(5) That the public interest, convenience and necessity will be served through the operation of the proposed station.

[38 FR 18895, July 16, 1973]

§ 73.732 Authorizations.

Authorizations issued to international broadcasting stations by the Commission will be authorizations to permit the construction or use of a particular transmitting equipment combination and related antenna systems for international broadcasting, and to permit broadcasting to zones or areas of reception specified on the instrument of authorization. The authorizations will not specify the frequencies to be used or the hours of use. Requests for frequencies and hours of use will be made as provided in § 73.702. Seasonal schedules, when issued pursuant to the provisions of § 73.702, will become attachments to and part of the instrument of authorization, replacing any such prior attachments.

[38 FR 18895, July 16, 1973]

§ 73.733 Normal license period.

All international broadcasting station licenses will be issued so as to expire at the hour of 3 a.m. local time and will be issued for a normal license period of 7 years expiring November 1.

[47 FR 151, Jan. 5, 1982]

§ 73.751 Operating power .

No international broadcasting station will be authorized to install, or be licensed for operation of, transmitter equipment with a rated carrier power of less than 50 kilowatts.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[38 FR 18895, July 16, 1973, as amended at 44 FR 65765, Nov. 15, 1979]

§ 73.753 Antenna systems.

All international broadcasting stations shall operate with directional antennas. Such antennas shall be designed and operated so that the radiated power in the maximum lobe toward the specific zone or area of reception intended to be served shall be at least 10 times the average power from the antenna in the horizontal plane. Radiation in all other directions shall be suppressed to the maximum extent technically feasible. In order to eliminate or mitigate harmful interference the direction of the maximum lobe may be adjusted upon approval of the Commission.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068 1082 (47 U.S.C. 154, 155, 303))

[38 FR 18895, July 16, 1973, as amended at 44 FR 65765, Nov. 15, 1979]

§ 73.754 Frequency monitors.

(a) The licensee of each international broadcast station shall operate a frequency monitor at the transmitter independent of the frequency control of the transmitter.

(b) The frequency monitor shall be designed and constructed in accordance with good engineering practice. It shall have an accuracy sufficient to determine that the operating frequency is within one-half of the allowed tolerance.

[37 FR 25842, Dec. 5, 1972]

§ 73.755 Modulation monitors.

The licensee of each international broadcast station shall have a modulation monitor in operation at the transmitter.

[37 FR 25842, Dec. 5, 1972]

§ 73.756 Transmission system requirements.

(a) *Design.* The construction, installation, operation, and performance of the international broadcasting transmitter system shall be in accordance with good engineering practice.

(b) *Spurious emission.* (1) Any emission appearing on a frequency removed from the carrier frequency by between 6.4 kHz and 10 kHz, inclusive, shall be attenuated at least 25 dB below the level of the unmodulated carrier. Compliance with the specification will be deemed to show the occupied bandwidth to be 10 kHz or less.

(2) Any emission appearing on a frequency removed from the carrier frequency by more than 10 kHz and up to and including 25 kHz shall be atten

ated at least 35 dB below the level of the unmodulated carrier.

(3) Any emission appearing on a frequency removed from the carrier frequency by more than 25 kHz shall be attenuated at least 80 dB below the level of the unmodulated carrier.

(4) In the event spurious emissions cause harmful interference to other stations or services, such additional steps as may be necessary to eliminate the interference must be taken immediately by the licensee.

(c) *Frequency control.* The transmitter shall be equipped with automatic frequency control apparatus so designed and constructed that it is capable of maintaining the operating frequency within 0.0015 percent of the assigned frequency.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[38 FR 18895, July 16, 1973, as amended at 44 FR 65765, Nov. 15, 1979]

§ 73.757 Auxiliary transmitters.

Upon showing that a need exists for the use of auxiliary transmitters, a license may be issued provided that:

(a) Auxiliary transmitters may be installed either at the same location as the main transmitters or at another location.

(b) A licensed operator shall be in control whenever auxiliary transmitters are placed in operation.

(c) The auxiliary transmitters shall be maintained so that they may be put into immediate operation at any time for the following purposes:

(1) The transmission of the regular programs upon the failure of the main transmitters.

(2) The transmission of regular programs during maintenance or modification work on the main transmitter, necessitating discontinuance of its operation for a period not to exceed 5 days. (This includes the equipment changes which may be made without authority as set forth elsewhere in the rules and regulations or as authorized by the Commission by letter or by construction permit. Where such operation is required for periods in excess of 5 days, request therefor shall be in accordance with § 73.3542 of this chapter.)

(3) Upon request by a duly authorized representative of the Commission.

(d) The auxiliary transmitters shall be tested at least once each week to determine that they are in proper operating condition and that they are adjusted to the proper frequency except that in the case of operation in accordance with paragraph (c) of this section during any week, the test in that week may be omitted provided the operation under paragraph (c) of this section is satisfactory. A record shall be kept of the time and result of each test. Such records shall be retained for a period of two years.

(e) The auxiliary transmitters shall be equipped with satisfactory control equipment which will enable the maintenance of the frequency emitted by the station within the limits prescribed by the regulations in this part.

(f) The operating power of an auxiliary transmitter may be less but not greater than the authorized power of the main transmitters.

[28 FR 13696, Dec. 14, 1963, as amended at 37 FR 25843, Dec. 5, 1972]

§ 73.758 Alternate main transmitters.

The licensee of an international broadcast station may be licensed for alternate main transmitters provided that a technical need for such alternate transmitters is shown and that the following conditions are met: Both transmitters:

(a) Are located at the same place;

(b) Shall have the same power rating; and

(c) Shall meet the construction, installation, operation, and performance requirements of good engineering practice.

[37 FR 25843, Dec. 5, 1972]

§ 73.759 Modification of transmission systems.

Specific authority, upon filing formal application (FCC Form 309) therefor, is required for any of the following changes:

(a) Change involving an increase or decrease in the power rating of the transmitters.

(b) A replacement of the transmitters as a whole.

(c) Change in the location of the transmitting antenna.

(d) Change in location of main studio, if it is proposed to move the main studio to a different city from that specified in the license.

(e) Change in the power delivered to the antenna.

(f) Change in frequency control and/or modulation system.

(g) Change in direction or gain of antenna system.

Other changes, not specified above in this section, may be made at any time without the authority of the Commission: *Provided*, That the Commission shall be immediately notified thereof and such changes shall be shown in the next application for renewal of license.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[38 FR 18895, July 16, 1973, as amended at 44 FR 65765, Nov. 15, 1979]

§ 73.761 Time of operation.

(a) All international broadcasting stations shall operate in accordance with the times indicated on their seasonal schedules.

(b) In the event that causes beyond a licensee's control make it impossible to adhere to the seasonal schedule or to continue operating, the station may limit or discontinue operation for a period of not more than 10 days, without further authority from the FCC. However, in such cases, the FCC shall be immediately notified in writing of such limitation or discontinuance of operation and shall subsequently be notified when the station resumes regular operation.

(c) In the event that causes beyond a licensee's control make it impossible to adhere to the seasonal schedule or to continue operating for a temporary period of more than 10 days, the station may not limit or discontinue operation until it requests and receives specific authority to do so from the FCC. When the station subsequently resumes regular operation after such limited operation or discontinuance of operation, it shall notify the FCC in Washington, D.C.

[38 FR 18895, July 16, 1973, as amended at 47 FR 40174, Sept. 13, 1982]

§ 73.764 International broadcast station operator requirements.

(a) One or more operators holding a commercial radio operator license or permit (any class, unless otherwise endorsed) must be on duty where the transmitting apparatus of each station is located and in actual charge thereof whenever it is being operated.

(b) The licensed operator on duty and in charge of the transmitter may, at the discretion of the station licensee, be employed for other duties or for the operation of other transmitters if such duties do not interfere with the proper operation of the transmission system.

(c) Operator licenses are to be posted as specified in § 73.1230.

[46 FR 35463, July 8, 1981, as amended at 49 FR 20670, May 16, 1984; 50 FR 40015, Oct. 1, 1985]

§ 73.765 Determining operating power.

The operating power specified in § 73.751 shall be determined by use of a calibrated dummy load or by any other method specified by the licensee and accepted by the Commission. Such method may subsequently be used by the licensee to maintain the authorized operating power.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[38 FR 18895, July 16, 1973, as amended at 44 FR 65765, Nov. 15, 1979]

§ 73.766 Modulation and bandwidth.

The percentage of modulation shall be maintained as high as possible consistent with good quality of transmission and good broadcast practice. In no case shall it exceed 100 percent on positive or negative peaks of frequent recurrence. It should not be less than 85 percent on peaks of frequent recurrence. The range of modulation frequencies shall be so controlled that the authorized bandwidth of the emission shall not be exceeded under all conditions of modulation. The highest modulating frequency shall not exceed 5 kHz.

[38 FR 18896, July 16, 1973]

§ 73.781 Logs.

The licensee or permittee of each international broadcast station must maintain the station log in the following manner:

(a) In the program log:

(1) An entry of the time each station identification announcement (call letters and location) is made.

(2) An entry briefly describing each program broadcast, such as "music", "drama", "speech", etc., together with the name or title thereof, language, and the sponsor's name, with the time of the beginning and ending of the complete program.

(3) For each program of network origin, an entry showing the name of the network originating the program.

[28 FR 13696, Dec. 14, 1963, as amended at 37 FR 25843, Dec. 5, 1972; 48 FR 38480, Aug. 24, 1983]

§ 73.782 Retention of logs.

Logs of international broadcast stations shall be retained by the licensee or permittee for a period of two years: *Provided, however*, That logs involving communications incident to a disaster or which include communications incident to or involved in an investigation by the Commission and concerning which the licensee or permittee has been notified, shall be retained by the licensee or permittee until he is specifically authorized in writing by the Commission to destroy them: *Provided, further*, That logs incident to or involved in any claim or complaint of which the licensee or permittee has notice shall be retained by the licensee or permittee until such claim or complaint has been fully satisfied or until the same has been barred by statute limiting the time for the filing of suits upon such claims.

[28 FR 13696, Dec. 14, 1963]

§ 73.787 Station identification.

(a) A licensee of an international broadcast station shall make station identification announcement (call letters and location), at the beginning and ending of each time of operation and during the operation on the hour.

(b) Station identification, program announcements, and oral continuity shall be made with international significance (language particularly) which is designed for the foreign country or countries for which the service is primarily intended.

[28 FR 13696, Dec. 14, 1963, as amended at 34 FR 19762, Dec. 17, 1969; 38 FR 18896, July 16, 1973]

§ 73.788 Service; commercial or sponsored programs.

(a) A licensee of an international broadcast station shall render only an international broadcast service which will reflect the culture of this country and which will promote international goodwill, understanding, and cooperation. Any program solely intended for and directed to an audience in the continental United States does not meet the requirements for this service.

(b) Such international broadcast service may include commercial or sponsored programs: *Provided*, That:

(1) Commercial program continuities give no more than the name of the sponsor of the program and the name and general character of the commodity, utility or service, or attraction advertised.

(2) In case of advertising a commodity, the commodity is regularly sold or is being promoted for sale on the open market in the foreign country or countries to which the program is directed in accordance with paragraph (c) of this section.

(3) In case of advertising an American utility or service to prospective tourists or visitors to the United States, the advertisement continuity is particularly directed to such persons in the foreign country or countries where they reside and to which the program is directed in accordance with paragraph (c) of this section.

(4) In case of advertising an international attraction (such as a world fair, resort, spa, etc.) to prospective tourists or visitors to the United States, the oral continuity concerning such attraction is consistent with the purpose and intent of this section.

(5) In case of any other type of advertising, such advertising is directed to the foreign country or countries to which the program is directed and is consistent with the purpose and intent of this section.

(c) The geographic areas to be served by international broadcasting stations are the zones and areas of reception shown in § 73.703.

(d) An international broadcast station may transmit the program of a AM broadcast station or network system: *Provided*, That the conditions in paragraph (b) of this section as to any commercial continuities are observed and when station identifications are made, only the call letter designation of the international station is given and its assigned frequency: *And provided further*, That in the case of chain broadcasting the program is not carried simultaneously by another international station (except another station owned by the same licensee operated on a frequency in a different group to obtain continuity of signal service), the signals from which are directed to the same area. (See section 3(p) of the Communications Act of 1934 for the definition of "chain broadcasting.")

[28 FR 13696, Dec. 14, 1963, as amended at 37 FR 25843, Dec. 5, 1972; 38 FR 18896, July 16, 1973]

Subpart G—Emergency Broadcast System

AUTHORITY: Secs. 1, 4 (i) and (o), and 303 (r), Communications Act of 1934, as amended.

SOURCE: 41 FR 52632, Nov. 30, 1976, unless otherwise noted.

SCOPE AND OBJECTIVES

§ 73.901 Scope of subpart.

This subpart contains rules and regulations providing for an Emergency Broadcast System (EBS). It applies to all broadcast stations under FCC jurisdiction, and is issued under authority of sections 1, 4(i), (o) and 303(r) of the Communications Act of 1934, as amended.

§ 73.902 Objectives of subpart.

The objective of this subpart is to provide a means for the development and implementation of Emergency Broadcast System planning and operation at the National, State, and local levels. Provision is made for operation of participating broadcast stations and other non-government industry entities on a voluntary, organized basis during emergency situations for the purpose of providing the President and the Federal government, as well as heads of State and local government, or their designated representatives, with a means of communicating with the general public. Participation in the EBS at the State and Operational (Local) Area levels is at the discretion of broadcast station management.

DEFINITIONS

§ 73.903 Emergency Broadcast System (EBS).

The EBS is composed of AM, FM and TV broadcast stations; low power TV stations; and non-government industry entities operating on a voluntary, organized basis during emergencies at National, State, or Operational (Local) Area Levels.

[47 FR 21494, May 18, 1982]

§ 73.904 Licensee.

The term "licensee" as used in this subpart means the holder of a broadcast station license granted or continuing in force under authority of the Communications Act of 1934, as amended. Such licensee includes any AM, FM, TV, or low power TV station holding a valid license, program test authorization, or other authorization permitting regular programming operation.

[47 FR 21494, May 18, 1982]

§ 73.905 Emergency Action Notification (EAN).

The Emergency Action Notification (EAN) is the notice to all licensees and regulated services of the FCC, participating non-government industry entities, and to the general public, of the activation of the EBS. The EAN is distributed in accordance with § 73.931.

§ 73.906 Attention signal.

The attention signal to be used by AM, FM, and TV broadcast stations to actuate muted receivers for inter-station receipt of emergency cuing announcements and broadcasts involve the use of two audio tones in the following arrangement:

(a) *Tone frequencies.* The two audio tones shall have fundamental frequencies of 853 and 960 Hertz and shall not vary over ±0.5 Hertz.

(b) *Harmonic distortion.* The total harmonic distortion of each of the audio tones shall not exceed 5%.

(c) *Minimum level of modulation.* Each of the two tones shall be calibrated separately to modulate the transmitter at no less than 40%. These two calibrated modulation levels shall have values that are within at least 1 dB of each other.

(d) *Time period for transmission of tones.* The two tones with the characteristics specified above shall automatically modulate the transmitter simultaneously at the resulting level for an automatic time period of not less than 20 seconds nor longer than 25 seconds.

§ 73.907 Emergency Action Termination.

The Emergency Action Termination is the notice to all licensees and regulated services of the FCC, participating non-government industry entities and to the general public of the termination of the EBS at the National level. This termination is distributed in the same manner as the dissemination of the EAN at the National level in accordance with § 73.931.

§ 73.908 EBS Checklist.

The EBS Checklist states in summary form the actions to be taken by station personnel upon receipt of the Emergency Action Notification, Termination or Test Messages. Two EBS Checklists are available: One for participating stations and the other for non-participating stations. A copy of the appropriate Checklist should be located at normal duty positions where it shall be immediately available to broadcast station staff responsible for: (a) Authenticating Emergency Action Notifications, Terminations, and Tests received; and (b) initiating appropriate EBS actions.

§ 73.909 Standard Operating Procedures (SOP's).

The SOPs are issued by the FCC and contain detailed operational instructions which are used for activating, terminating and testing the National level EBS. They are issued to specified control points of the national radio and television networks, participating cable systems and common carriers, the wire services, and other participating organizations.

(a) *SOP-1, EBS Activation and Termination Procedures.* This SOP contains the detailed operational and authentication procedures for activation, operation, and termination of the EBS in response to an actual National emergency situation.

(b) *SOP-2, EBS Test Transmissions.* This SOP contains the detailed operational and authentication procedures for testing the EBS at the National level.

(c) *SOP-3, the National Information Center.* This SOP contains the detailed operational and authentication procedures for the distribution of United States Government national releases and official information.

[41 FR 52632, Nov. 30, 1976, as amended at 53 FR 15396, Apr. 29, 1988]

§ 73.910 Authenticator word lists.

The Authenticator word lists are issued by the FCC annually. These include the Red and White envelopes and the National Information Center (NIC) booklet. The lists are used in conjunction with procedures contained in the EBS Checklists and SOPs for tests or actual National emergency situations.

(a) *EBS Authenticator List—Red Envelope.* This document is used for authentication purposes in conjunction with the procedures contained in the EBS Checklists and the Standard Operating Procedures (SOPs) 1 and 2. It is issued to all broadcast stations and specified control points (national radio and television networks, participating cable systems and common carriers, the wire services, and other participating organizations).

(b) *EBS Authenticator List—White Envelope.* This document is used for caller identification purposes in conjunction with the Last Resort procedures in SOP-1 and SOP-2, and is issued to the above specified control points.

(c) *NIC Authenticator List—Booklet.* This document is used for authentication purposes in conjunction with the procedures contained in SOP-3. It is issued to participating control points.

[53 FR 15396, Apr. 29, 1988]

§ 73.912 Emergency Broadcast System participants.

The following non-government industry entities voluntarily participate in the Emergency Broadcast System (EBS):

(a) *Radio and Television Networks.*

(1) ABC Radio and ABC-TV.

(2) Associated Press Radio (APR).

(3) CBS Radio and CBS-TV.

(4) Mutual Brcadcasting System (MBS).

(5) MUZAK.

(6) NBC Radio.

(7) NBC-TV.

(8) National Public Radio (NPR).

(9) Public Broadcasting Service (PBS-TV).

(10) Satellite Music Network.

(11) Transtar.

(12) United Press International Audio (UPIA).

(13) United Stations.

(b) *Cable Networks and Program Suppliers.*

(1) Cable News Network (CNN).

(2) Christian Broadcasting Network (CBN).

(3) Cinemax.

(4) Disney Channel.

(5) Entertainment and Sports Programming Network (ESPN).

(6) Home Box Office (HBO).

(7) Movie Channel.

(8) MTV.

(9) Nashville Network.

(10) Nickelodeon.

(11) Showtime.

(12) VH-1.

(13) Weather Channel.

(c) *Wire Services.*

(1) Associated Press (AP).

(2) United Press International (UPI).

(d) *Common Carriers.*

(1) American Telephone and Telegraph (AT&T).

[54 FR 15196, Apr. 17, 1989]

§ 73.913 Emergency Broadcast System Authorization.

(a) This authorization is issued by the FCC to licensees of broadcast stations to permit operation on a voluntary, organized basis during a National emergency consistent with the provisions of this subpart of the rules and regulations. This authorization wi remain in effect during the period of the initial license and subsequent renewals unless returned by the holder or suspended, modified or withdrawn by the Commission.

(b) An EBS Authorization is not required in order to participate on a voluntary, organized basis in State and Operational (Local) Area Emergency Broadcast System operations as set forth in § 73.935.

(c) Any non-participating broadcast station may request an EBS authorization by making such request via informal letter to the FCC in Washington, DC 20554.

[41 FR 52632, Nov. 30, 1976, as amended at 44 FR 38485, July 2, 1979]

§ 73.914 Primary Station (Primary).

A Primary Station broadcasts or rebroadcasts a common emergency program for the duration of the activation of the EBS at the National, State or Operational (Local) Area Level. The EBS transmissions of such stations are intended for direct public reception as well as inter-station programming.

§ 73.915 Primary Relay Station (P Relay).

A Primary Relay Station (an integral part of the State Relay Network is a broadcast station responsible f the relay of National level and State level common emergency programming into the Operational (Local) Area levels.

§ 73.916 Common Program Control Station (CPCS).

This is a primary Station in an Operational (Local) Area which preferably has special communication links with appropriate authorities (e.g., National Weather Service, Civil Defense, local or State government authorities, etc. as specified in the State EBS Operational Plan. A Primary CPCS Station is responsible for coordinating the carriage of a common emergency program for its area. If it is unable to carry out this function, other Primary Stations in the Operational (Local) Area will be assigned the responsibility as indicated in the State EBS Operational Plan.

§ 73.917 Originating Primary Relay Station (Orig Pri Relay).

An Originating Primary Relay Station is a station as defined in § 73.915 that acts as the originating station source of a common program from the State capital or State emergency operating center for the State Relay Network, and may be programmed directly by the Governor or a designated representative.

§ 73.918 Non-participating Station (Non-EBS).

This is a broadcast station which has elected not to participate in the National level EBS and does not hold an EBS authorization. Upon activation of the EBS at the National level such stations are required to remove their carriers from the air and monitor for the Emergency Action Termination in accordance with the instructions in the EBS Checklist for Non-Participating Stations. This is a broadcast station which has elected not to participate in the National level EBS and does not hold an EBS Authorization. Upon activation of the EBS at the National level, such stations are required to broadcast the EBS Attention Signal and the appropriate EBS message, then remove their carriers from the air and monitor for the Emergency Action Termination in accordance with the instructions in the EBS Checklist for Non-participating Stations. All broadcast stations (including Non-Participating Stations) are required to comply with § 73.932.

[41 FR 52632, Nov. 30, 1976, as amended at 53 FR 15396, Apr. 29, 1988]

§ 73.919 State Relay Network.

A State Relay Network is a relay network, composed of Primary Relay Stations and leased common carrier communications facilities and any other available communication facilities, for disseminating statewide emergency programming originated by the Governor or a designated representative.

§ 73.920 Operational (Local) Area.

This is a geographical area which encompasses a number of contiguous communities as shown in the State EBS Operational Plan.

§ 73.921 State Emergency Broadcast System Operational Plan.

This plan contains the necessary guidance for the voluntary coordination between appropriate authorities (e.g. National Weather Service, Civil Defense, local or State government, etc.) and the broadcast industry to communicate with the general public during a State or local emergency situation. Additional procedural guides, SOP's and other implementing instructions should be developed at the State and local levels to insure effective operation of the EBS at the State and Operational (Local) Area levels.

§ 73.922 Emergency Broadcast System programming priorities.

(a) Program priorities for EBS are as follows:

Priority One—Presidential Messages
Priority Two—Operational (Local) Area Programming
Priority Three—State Programming
Priority Four—National Programming and News

(b) Participating stations that remain on the air during a National emergency situation must carry Presidential Messages "live" at the time of transmission. Activation of the National level EBS will preempt operation of the Operational (Local) Area or State level EBS.

(c) During a national emergency the radio and television (aural) broadcast network program distribution facilities shall be reserved exclusively for distribution of Presidential Messages and National Information. National Information which is not broadcast at the time of original transmission shall be recorded locally by the CPCS stations for broadcast at the earliest opportunity consistent with Operational (Local) Area requirements.

[41 FR 52632, Nov. 30, 1976, as amended at 53 FR 15397, Apr. 29, 1988]

PARTICIPATION

§ 73.926 Participation in the Emergency Broadcast System.

(a) The FCC will send to new licensees an EBS authorization and a letter requesting their voluntary participation in the EBS. Stations are requested to accept or decline this authorization within 30 days of receipt. Should the request be declined, the EBS Authorization should be returned to FCC. In either event, an appropriate EBS Checklist and EBS station designation will be forwarded to the station manager.

(b) Any existing licensee who is not already a participant and desires to participate voluntarily in the National level EBS must submit a written request to FCC. The FCC may then issue an EBS Authorization.

(c) Any station may change its EBS status from Participating to Non-participating (see § 73.918) by giving 30 days written notice and by returning its EBS Authorization to the FCC.

(d) Any AM, FM, TV, or Low Power TV broadcast station or cable, satellite, wire or radio network or system may, at the discretion of management, voluntarily participate in the State level and Operational (Local) level EBS in accordance with the provisions of the State EBS Operational Plan. An EBS Authorization is not required.

[41 FR 52632, Nov. 30, 1976, as amended at 53 FR 15397, Apr. 29, 1988; 54 FR 15196, Apr. 17, 1989]

§ 73.927 Participation by communications common carriers.

(a) Communications common carriers which have facilities available in place, may, without charge, connect an independent broadcast station to the radio and television (aural) broadcast networks or participating cable systems for the duration of the activation of the National level EBS; provided that the station has in service a local channel from the station's studio or transmitter directly to the broadcast source or a broadcast connection point.

(b) During the activation of the National level EBS, communications common carriers which have facilities in place may, without charge, connect an originating source from the neare exchange to a selected Test Cente and then to the radio and televisio (aural) broadcast networks and partic pating cable systems for the duratio of the emergency: provided, that:

(1) The originating source has service a local channel from the orig nating point to the nearest Exchang

(2) An Emergency Action Notific tion is requested by the White Hous

(c) Upon receipt of the Emergenc Action Termination the communic tions common carriers shall:

(1) Disconnect the participating dependent station.

(2) Disconnect the originati source.

(3) Restore the networks to the original configurations.

(d) During Closed Circuit Tests the National level EBS, communic tions common carriers which have cilities in place may, without charg connect an originating source from the nearest Exchange to a selected Te Center and then to the radio netw and any participating television ne works and cable systems. No partic pating independent station may connected during the test unless thorized by the FCC. Upon termin tion of the tests, all participating ne works shall be restored to their orig nal configuration.

(e) Every such carrier rendering such free service shall make and fi in duplicate, with the FCC, on before the 31st day of July and on before the 31st day of January of ea year, reports covering the periods of months ending on the 30th day June and the 31st day of December spectively, next prior to said date These reports shall show in det what free service was rendered pur ant to this rule and the charges in do lars which would have accrued to th carrier for such services rendered charges therefor had been collected the published tariff rates.

[41 FR 52632, Nov. 30, 1976, as amended 53 FR 15397, Apr. 29, 1988]

ACTIVATION ACTIONS

§73.931 Dissemination of Emergency Action Notification.

(a) *National level.* The Emergency Action Notification (EAN) will be released at this level upon request of the White House. The EAN message is disseminated from the origination point on a dedicated network to control points of the radio and television networks, participating cable systems and communications common carriers, the wire services, and other participating organizations. The EAN is then furher disseminated as follows by:

(1) The internal alerting facilities of he Radio and Television Broadcast Networks to all affiliates.

(2) The wire services to all subscribers (AM, FM, TV, and Low Power TV nd other stations).

(3) Off-the-air monitoring of AM, FM, TV, and Low Power TV broadcast tations and other licensees and reguated services.

Receipt of the EAN via any one of the bove arrangements is sufficient to egin emergency actions set forth in 73.933.

(4) The participating cable systems o all subscribers.

(b) *State level.* The dissemination arangements for the EAN at this level riginate from the State and Federal overnment authorities in accordance ith the State EBS Operational Plan.

(c) *Operational (Local) Area level.* The dissemination arrangements for he EAN at this level originate from cal government authorities in acordance with the Local EBS Opertion Plan.

(d) Prior to commencing routine opration or originating any emissions nder program test equipment test, xperimental, or other authorizations r for any other purpose, licensees or ermittees shall first ascertain whethr the EBS has been activated by one r all of the following methods:

(1) Monitor the radio and TV netork facilities.

(2) Check the Radio Press Wire ervice (AP and UPI).

(3) Monitor the Primary CPCS Staon and/or the Primary Relay Station r your Operational (Local) Area.

If so, operation shall be in accordance with this subpart of the rules.

[41 FR 52632, Nov. 30, 1976, as amended at 53 FR 15397, Apr. 29, 1988]

§ 73.932 Radio Monitoring and Attention Signal transmission requirement.

(a) *Monitoring Requirements.* To insure effective off-the-air monitoring (§ 73.931(a)(3)), all broadcast station licensees must install and operate, during their hours of operation, equipment capable of receiving the Attention Signal and emergency programming by other radio or television stations. This equipment must be maintained in operative condition, including arrangements for human listening watch or automatic alarm devices. This equipment must be installed in the broadcast station, either at the transmitter control location and/or studio location, in such a way that it enables the broadcast station staff, at normal duty locations, to be alerted instantaneously upon the receipt of the attention signal and to immediately monitor the emergency programming. For situations where broadcast stations are co-owned and co-located (e.g. an AM and FM licensed to the same entity at the same location) with a combined studio facility, only one receiver is required if installed in the combined studio facility. The off-the-air signal monitoring assignment of each broadcast station is specified in the State EBS Operational Plan.

(b) *Transmission requirement.* All broadcast station licensees except noncommercial educational FM stations authorized to operate with transmitter output powers of 0.010 kW or less and low power TV stations, must install, operate, and maintain equipment capable of generating the Attention Signal (see § 73.906) to modulate the transmitter so that the signal may be broadcast to other stations. This signal is used to alert other broadcast stations to the fact that the EBS is being activated at the National, State or local level. It is also used during the Weekly Tests involving the transmission and reception of the Attention Signal and Test Script in accordance with § 73.961(c). This equipment must be installed in the broadcast station either at the transmitter control point and/or studio location in such a way that it enables the broadcast station staff at normal duty locations to initiate the two-tone transmission. For situations where broadcast stations are co-owned and co-located (e.g., an AM and FM licensed to the same entity at the same location) with a combined studio facility, only one generator is required if installed in the combined studio facility.

(c) The licensee has the responsibility to insure that the equipment used for off-the-air signal monitoring and generating the EBS Attention Signal is in functioning condition during all times the station is in operation, and to determine the cause of any failure to receive the Weekly Transmission Tests as described in paragraph (c) of § 73.961. Appropriate entries must be made in the station log, indicating reasons why the Weekly Test Transmissions were not received.

(d) In the event that the equipment for receiving the Attention Signal and emergency programming transmitted by other broadcast stations, or the equipment for generating the Attention Signal becomes defective, the station may operate without the defective equipment pending its repair or replacement for a period not in excess of 60 days without further authority of the Commission, provided that appropriate entries are made in the station log showing the date and the time the equipment was removed and restored to service. Weekly Test Transmissions of the Test Script, without the equipment for generating the Attention Signal, must still be conducted.

(e) If conditions beyond the control of the licensee prevent the restoration of the defective equipment to service within the above allowed period, informal request in accordance with § 73.3549 of this chapter may be filed with the Engineer in Charge of the radio district in which the station is operating for such additional time as may be required to complete repairs of the defective equipment.

[41 FR 52632, Nov. 30, 1976, as amended at 47 FR 21494, May 18, 1982; 48 FR 38480, Aug. 24, 1983; 53 FR 15397, Apr. 29, 1988; 54 FR 15196, Apr. 17, 1989]

§ 73.933 Emergency Broadcast System operation during a National level emergency.

(a) An EBS Checklist will be posted at normal duty positions where it shall be immediately available to broadcast station personnel responsible for EBS actions. This Checklist summarizes the procedures to be followed upon receipt of a National level Emergency Action Notification or Termination Message in accordance with arrangements described in § 73.931(a).

(b) Immediately upon receipt of an EAN message all licensees will proceed as follows:

(1) Monitor the radio and television networks, and/or the participating cable systems, for further instructions from the network control point.

(2) Check the wire services (AP UPI). Verify the authenticity of the message with the current EBS Authenticator List (Red envelope).

(3) Monitor your EBS monitoring assignment (See State EBS Operational Plan) for the receipt of any further instructions.

(4) Discontinue normal programming and follow the transmission procedures set forth in the appropriate EBS Checklist.

(i) Primary CPCS, Originating Primary Relay, Primary Relay, and Primary stations follow the transmission procedures and make the announcements under the National Level Instructions of the EBS Checklist for Participating Stations.

(ii) Non-participating stations follow the transmission procedures and make the announcements under the National Level Instructions of the EBS Checklist for Non-Participating Stations. Following the announcement non-participating stations are required to remove their carriers from the air and monitor for the Emergency Action Termination.

(5) Upon completion of the above transmission procedures:

(i) Participating stations will begin broadcast of a common emergency program. All stations shall carry the common emergency program until receipt of the Emergency Action Termination Message. Programming priorities are set forth in § 73.922. Feeds will be provided by one or more of the following:

(a) Common Program Control Stations.

(b) Radio and Television Broadcast Networks.

(c) Originating Primary Relay and Primary Relay Stations in the State Relay Network.

(d) Participating cable networks and systems.

(ii) Should it become apparent that the primary CPCS Station or Primary Relay Station of an Operational (Local) Area may not be able to provide an appropriate emergency program feed, other Primary Stations of the area may elect to assume the duties of providing a program feed. This should be done in an organized manner as designated in the State EBS Operational Plans.

(6) The Standby Script shall be used until program material is available. The text of the Standby Script is contained in the EBS Checklist for Participating Stations.

(7) TV Broadcast stations shall display an appropriate EBS slide and then transmit all announcements visually and aurally in the manner described in § 73.1250(h).

(8) Stations which provide foreign language programming may transmit emergency announcements in the foreign language prior to broadcasting such announcements in English.

(9) Broadcast Stations in the International Broadcast Service will cease broadcasting immediately upon receipt of an Emergency Action Notification and will maintain radio silence. However, under certain conditions they may be issued appropriate emergency authorization by the FCC with concurrence of the Director, Office of Science and Technology Policy, in which event they will transmit only Federal Government broadcast or communications. The station's carrier must be removed from the air during periods of no broadcasts or communications transmissions.

(10) Stations may broadcast their call letters during an EBS activation. State and Operational (Local) Area identifications shall also be given.

(11) All stations operating and identified with a particular Operational (Local) Area will broadcast a common emergency program until receipt of the Emergency Action Termination.

(12) Broadcast stations holding an EBS Authorization are specifically exempt from complying with §§ 73.62 and 73.1560 (pertaining to maintenance of operating power) while operating under this subpart of the rules.

(c) Upon receipt of an Emergency Action Termination Message all stations will follow the termination procedures set forth in the EBS Checklists.

(d) Stations originating emergency communications under this section shall be deemed to have conferred rebroadcast authority, as required by Section 325(a) of the Communications Act of 1934, as amended, and § 73.1207, on other participating stations.

[41 FR 52632, Nov. 30, 1976, as amended at 42 FR 58751, Nov. 11, 1977; 44 FR 39181, July 5, 1979; 49 FR 50048, Dec. 26, 1984; 53 FR 15397, Apr. 29, 1988]

DAY-TO-DAY EMERGENCY OPERATION

§ 73.935 Day-To-Day emergencies posing a threat to the safety of life and property; State Level and Operational (Local) Area Level Emergency Action Notification.

(a) State level or Operational (Local) Area Level. The EBS may be activated at this level by AM, FM, and TV broadcast stations, at management's discretion, in connection with day-to-day emergency situations posing a threat to the safety of life and property. Examples of emergency situations which may warrant either an immediate or delayed response by the licensee are: Tornadoes, hurricanes, floods, tidal waves, earthquakes, icing conditions, heavy snows, widespread fires, discharge of toxic gases, widespread power failures, industrial explosions, and civil disorders.

(b) Stations originating emergency communications under this section shall be deemed to have conferred rebroadcast authority, as required by section 325(a) of the Communications Act of 1934, as amended, and § 73.1207 of the rules and regulations, on other participating stations.

(c) Cable networks and systems may voluntarily participate in the EBS in accordance with the provisions of the State EBS Operational Plan.

[41 FR 52632, Nov. 30, 1976, as amended at 53 FR 15398, Apr. 29, 1988]

§ 73.936 Emergency Broadcast System operation during a State level emergency.

(a) An EBS Checklist will be posted at normal duty positions where it shall be immediately available to broadcast station personnel responsible for EBS action.

(b) Operations will be conducted in accordance with the provisions of the State EBS Operational Plan.

(c) An EBS Authorization is not required for a broadcast station to participate in the operation of the State-Level EBS.

(d) Immediately upon receipt of a State level Emergency Action Notification, all licensees and cable networks and systems participating may at the discretion of management, proceed as follows:

(1) Monitor the State Relay Network (Primary Relay Stations) for receipt of any further instructions from the Originating Primary Relay Stations.

(2) Monitor the Primary Stations designated as the CPCS for your Operational (Local) Area for the receipt of any furthei instructions.

(3) All licensees and cable networks and systems participating in the State level EBS shall discontinue normal programming and follow the transmission procedures set forth in the appropriate EBS Checklist and State EBS Operational Plan (§ 73.921) under the State and Local Level Instructions. Stations which provide foreign language programming may transmit emergency announcements in the foreign language prior to broadcasting such announcements in English. TV stations shall display an appropriate EBS slide and then transmit all announcements visually and aurally in the manner described in § 73.1250(h).

(4) Upon completion of the above transmission procedures, resume normal programming until receipt of the cue from the CPCS for your Operational (Local) Area, or Primary Relay Station of the State EBS Network. At that time begin broadcasting the State level common emergency program received from one of the following sources:

(i) Common Program Control Station for your Operational (Local) Area.

(ii) Any Primary Relay Station of the State Relay Network.

(5) All licensees may resume normal broadcast operations upon conclusion of the State level EBS broadcast.

[41 FR 52632, Nov. 30, 1976, as amended at 53 FR 15398, Apr. 29, 1988]

§ 73.937 Emergency Broadcast System operation during an Operational (Local) Area emergency.

(a) An EBS Checklist will be posted at normal duty positions where it shall be immediately available to broadcast station personnel responsilbe for EBS actions.

(b) Operations will be conducted in accordance with the provisions of the State EBS Operational Plan.

(c) An EBS Authorization is not required for a broadcast station to participate in the operation of the local level EBS.

(d) Immediately upon receipt of an Operational (Local) Area Level Emergency Action Notification message, all licensees and cable networks and systems participating may, at the discretion of management, proceed as follows:

(1) Monitor the Primary Station designated as the CPCS for your Operational (Local) Area for the receipt of any further instructions.

(2) Monitor the Primary Relay Station for your Operational (Local) Area for receipt of any further instructions.

(3) All licensees and cable networks and systems participating in the Operational (Local) Area level EBS shall discontinue normal programming and follow the transmission procedures set forth in the State and Local EBS Operational Plan. Stations which provide foreign language programming may transmit emergency announcements in the foreign language prior to broadcasting such announcements in English. TV stations shall display an appropriate EBS slide and then transmit all announcements visually and aurally in the manner described in § 73.1250(h).

(4) Upon completion of the above transmission procedures, resume normal programming until receipt of the cue from the CPCS for your Operational (Local) Area. At that time begin broadcasting the common emergency program received from one of the following sources for your Operational (Local) Area.

(i) Common Program Control Station.

(ii) Primary Relay Station.

(5) All licensees may resume normal broadcast operations upon conclusion of the Operational (Local) Area level EBS broadcast.

[41 FR 52632, Nov. 30, 1976, as amended at 53 FR 15398, Apr. 29, 1988]

EBS ATTENTION SIGNAL EQUIPMENT

§ 73.940 Encoder devices.

An encoder device shall be used by broadcast stations for the generation of the two-tone Attention Signal. Only noncommercial educational FM stations of 0.01 kW or less and low power TV stations are exempt from the requirement of installing the encoder device. The encoder device shall comply with the following requirements:

(a) *Tone Frequencies.* The two audio signals of the encoder shall have fundamental frequencies of 853 and 960 Hz. The frequency of each tone shall not vary more than ±0.5 Hz.

(b) *Harmonic Distortion.* Total harmonic distortion of each of the audio tones shall not exceed 5 percent as measured at the output terminals of the encoder.

(c) *Minimum Level of Output.* The encoder shall have an output level capability of at least +8 dBm into a 600 ohm load impedance at each audio tone. (The output level of each tone shall be calibrated individually.) A non-locking switch (or switches) shall be provided in the encoder to permit individual activation of the two tones for calibration of associated systems.

(d) *Time Period for Transmission of Tones.* The encoder shall have timing circuitry that will automatically allow for the generation of the two tones simultaneously for a period of not less than 20 seconds nor longer than 25 seconds.

(e) *Operating Temperature.* Encoders shall have the ability to operate with the above specifications of paragraphs (a), (b), (c), and (d) of this section within at least an ambient temperature range of from 0 to +50° C.

(f) *Operating Humidity.* Encoders shall have the ability to operate with the above specifications of paragraphs (a), (b), (c), and (d) of this section in a range of relative humidity of up to 95%.

(g) *Primary Supply Voltage Variation.* The encoder shall be capable of operation within the tolerances specified in this section during a variation in primary supply voltage of 85 percent to 115 percent of the rated value.

(h) *Testing Encoder Units.* Encoders not covered by the provision of § 73.943 shall be tested in the presence of a minimum RF field of 10 V/m at a frequency in the AM broadcast band and in the presence of a minimum RF field of .5 V/m at a frequency in either the FM or TV broadcast bands to simulate actual working conditions. At least the parameters specified in paragraphs (a), (b), and (d) of this section shall be tested in the RF fields as specified.

(i) *Indicator Device.* The encoder shall be provided with a visual and/or aural indicator which clearly shows that the device is activated.

(j) *Switch Guard.* The switch used for initiating the automatic generation of the simultaneous tones shall be protected in a manner which will prevent accidental operation. This includes switching devices used in a remote control fashion.

[41 FR 52632, Nov. 30, 1976, as amended at 47 FR 30495, July 14, 1982]

§ 73.941 Decoder devices.

Decoder devices shall have detection and activation circuitry that will demute a broadcast receiver only upon the simultaneous detection of the two audio tones of 853 Hz and 960 Hz.

(a) For the purpose of preventing false responses, decoder devices, designed to utilize the two tones for broadcast receiver demuting, shall contain circuitry designed to meet the following specifications and thereupon be certified by the Commission:

(1) *Time delay.* A time delay of a minimum of 8 seconds but not more than 16 seconds of tone reception shall be incorporated into the activation or demuting process to insure that the tones will be audible for a period of from 4 seconds to 17 seconds.

(2) *Operation Bandwidth.* The decoder circuitry shall not respond to tones which vary more than ±5 Hz from each of the frequencies, 853 Hz and 960 Hz.

(b) *Reset Ability.* The decoder shall have a switching device which, when operated manually, resets the associated broadcast receiver to a muted state.

(c) *Operating Temperature.* Decoders shall have the ability to operate with the above specifications of paragraphs (a) and (b) of this section within at least an ambient temperature range from 0 to +50°C.

§ 73.942 Acceptability of EBS Attention Signal equipment.

(a) An encoder device used for generating the EBS Attention Signal must be type accepted by following the procedures set forth in subpart J of part 2 of the rules and regulations. The data and information submitted shall show capability of the equipment to meet the requirements of § 73.940.

(b) A decoder device used for the detection of the EBS Attention Signal shall be certified following the applicable procedures set forth in Subpart J of part 2 and subpart B of part 15 of the Rules and Regulations. This requirement shall also apply to decoders which are part of a broadcast receiver. The data and information submitted shall show capability of the equipment to meet the requirements of § 73.941.

[40 FR 34118, Aug. 14, 1975, as amended by 53 FR 15398, Apr. 29, 1988]

§ 73.943 Individual construction of encoders and decoders.

(a) A station licensee who constructs decoders and/or encoders for use at his station and not for sale must submit the fees required for certification and type acceptance applications. Requests for waiver or deferral of fees will be considered on a case by case basis. *See* subpart G, part 1 of this section for fees due and waiver procedures.

(b) The provisions of § 73.942 (a) and (b) shall apply to encoders and decoders constructed by individual station licensees.

[41 FR 52632, Nov. 30, 1976, as amended at 52 FR 5294, Feb. 20, 1987]

TESTS

§ 73.961 Tests of the Emergency Broadcast System procedures.

Tests of the EBS procedures will be made at regular intervals as indicated below. Appropriate entries must be made consistently in the station log concerning EBS tests received and transmitted by broadcast stations.

(a) Weekly Emergency Action Notification (EAN) Network Transmissions. Test transmissions of the National level interconnection facilities will be conducted on a random basis once each week. The tests will originate on an alternate basis from one of two origination points over a dedicated government network to the control points of the radio and television networks, participating cable systems and common carriers, the wire services, and other participating organizations. These tests will be in accordance with the procedures set forth in EBS SOP-2 which is furnished to the non-government entities concerned.

(b) *Periodic Wire Service Test Transmissions.* AP and UPI will separately conduct test transmissions to AM, FM and TV broadcast stations, on their Radio Wire Teletype Networks, a maximum of twice a month on a random basis at times of their choice. These tests will be conducted in accordance with procedures set forth in EBS SOP-2 which is furnished to the non-government entities concerned and the EBS Checklist furnished to all broadcast stations.

(c) *Weekly Transmission Tests of the Attention Signal and Test Script.* Except as provided in paragraph (d) of this section, these tests shall be conducted by all AM, FM and TV stations a minimum of once a week at random days and times between the hours of 8:30 a.m. local time and local sunset. These tests will be conducted in accordance with procedures set forth in the EBS Checklist furnished to all broadcast stations; however, Class D noncommercial educational FM stations authorized to operate with transmitter output powers of 0.01 kW or less and low power TV stations need not transmit the two-tone EBS Attention Signal.

(d) Activation of the EBS at the State or local level by a broadcast station, or coordinated tests of EBS operational procedures for an entire State or Operational (Local) Area may be conducted in lieu of the Weekly Transmission Tests of the Attention Signal and Test Script required in paragraph (c) of this section. Tests of implementing procedures developed at the State and local levels may be conducted on a day-to-day basis as indicated in State EBS Operational Plans.

(e) Stations originating emergency communications under this section shall be deemed to have conferred rebroadcast authority, as required by section 325(a) of the Communications Act of 1934, as amended, and § 73.1207 of this part.

[41 FR 52632, Nov. 30, 1976, as amended at 46 FR 26650, May 14, 1981; 47 FR 30495, July 14, 1982; 48 FR 38480, Aug. 24, 1983; 53 FR 15398, Apr. 29, 1988]

§ 73.962 Closed Circuit Tests of approved National level interconnecting systems and facilities of the Emergency Broadcast System.

(a) Tests of approved National level interconnecting systems and facilities of non-government entities voluntarily participating in the EBS will be conducted on a random or scheduled basis not more than once a month and not less than once every three months. The time of the test will be selected by both the White House and participating industry personnel in coordination with the FCC. Unless a random Closed Circuit Test has been selected, the FCC will notify the networks, wire services and participating cable systems and common carriers of the selected time window, four working days (holidays excluded) prior to the test.

(b) The details of these Closed Circuit Test procedures are contained in the EBS Checklists issued to all broadcast stations and in SOP-2 issued by the FCC to those non-Government entities concerned.

(c) The control points of the radio and television networks, the wire services and the participating cable systems and common carriers will receive notification of the Closed Circuit Tests by a "Closed Circuit Test Activation Message".

(d) The National level EBS will be tested on a closed circuit basis. These test broadcasts will originate from a point selected by the White House with program feed circuitry connected to the Telephone Company Toll Test Center at points coordinated for each test. Participating common carriers will interconnect, as required, the facilities of the radio networks and any other participants in the test. The telephone companies are not authorized to add any of the independent stations participating in the EBS unless authorized by FCC. Authentication will be provided to the Telephone Company Toll Test Center or other program entry location responsible for the particular test arrangements to be used. Authentication used in the Closed Circuit Test Message will be the test words printed on the outside of the EBS Authenticator List—Red Envelope.

(e) Closed Circuit Test procedures for radio network affiliates, wire service subscribers, and if participating, television network affiliates and cable systems are as follows:

(1) Notification of a Closed Circuit Test will be received in accordance with procedures set forth in § 73.931(a) (1) and (2) and the EBS Checklist.

(2) Immediately monitor your radio network (and if participating, your television or cable system) and check your wire service teletype machine for the receipt of the Closed Circuit Test Activation Message. Verify authenticity using the test words printed on the outside cover of the current issue of the EBS Authenticator List—Red Envelope.

(3) Continue to monitor your radio network (and if participating, your television network or cable system) for the audio talkup and the Closed Circuit Test audio program.

(4) Enter the time of receipt of the Closed Circuit Test consistently in your station log.

(5) The Closed Circuit Test will terminate on the following aural Closed Cue as it appears in the text of the test program:

> This concludes the Closed Circuit Test of the Emergency Broadcast System

(6) Following the closing cue as indicated in paragraph (e)(5) of this section, wire service subscribers only will receive a "Closed Circuit Test Termination Message". Record the time of receipt of this message as indicated in paragraph (e)(4) of this section.

(f) The Federal Communications Commission may request a report of a Closed Circuit Test as deemed appropriate in a format as prescribed by the Commission.

[41 FR 52632, Nov. 30, 1976, as amended at 48 FR 38480, Aug. 24, 1983; 53 FR 15398, Apr. 29, 1988; 54 FR 15196, Apr. 17, 1989]

Subpart H—Rules Applicable to All Broadcast Stations

§ 73.1001 Scope.

(a) The rules in this subpart are common to all AM, FM, and TV broadcast services, commercial and noncommercial.

(b) Rules in part 73 applying exclusively to a particular broadcast service are contained in the following: AM, subpart A; FM, subpart B; Noncommercial Educational FM, subpart C; and TV, subpart E.

(c) Certain provisions of this subpart apply to International Broadcast Stations (subpart F, part 73), Low Power TV, TV Translator and TV Booster Stations (subpart G, part 74) where the rules for those services so provide.

(d) The provisions of this part applying to licensees also apply to holders of construction permits (permittees).

[43 FR 32781, July 28, 1978, as amended at 52 FR 31399, Aug. 20, 1987]

§ 73.1010 Cross reference to rules in other parts.

Certain rules applicable to broadcast services, some of which are also applicable to other services, are set forth in the following Parts of the FCC Rules and Regulations.

(a) Part 1, "Practice and Procedure."

(1) Subpart A, "General Rules of Practice and Procedure". (§§ 1.1 to 1.120).

(2) Subpart B, "Hearing Proceedings". (§§ 1.201 to 1.364)

(3) Subpart C, "Rulemaking Proceedings". (§§ 1.399 to 1.430).

(4) Subpart G, "Schedule of Statutory Charges and Procedures for Payment". (§§ 1.1101 to 1.1116).

(5) Subpart H, "Ex Parte Communications". (§§1.1200 to 1.1216).

(6) Subpart I, "Procedures Implementing the National Environmental Policy Act of 1969". (§§ 1.1301 to 1.1319).

(b) Part 2, "Frequency Allocations and Radio Treaty Matters, General Rules and Regulations", including Subparts A, "Terminology"; B, "Allocation, Assignments and Use of Radio Frequencies"; C, "Emissions"; D, "Call Signs and Other Forms of Identifying Radio Transmissions"; and J, "Equipment Authorization Procedures".

(c) Part 13, "Commercial Radio Operators".

(d) Part 17, "Construction, Marking and Lighting of Antenna Structures".

(e) Part 74, "Experimental, Auxiliary and Special Broadcast and Other Program Distributional Services" including:

(1) Subpart A, "Experimental Broadcast Stations";

(2) Subpart D, "Remote Pickup Broadcast Stations";

(3) Subpart E, "Aural Broadcast Auxiliary Stations";

(4) Subpart F, "Television Broadcast Auxiliary Stations";

(5) Subpart G, "Low Power TV, TV Translator and TV Booster Stations";

(6) Subpart H, "Low Power Auxiliary Stations";

(7) Subpart I, "Instructional TV Fixed Service"; and

(8) Subpart L, "FM Broadcast Translator Stations and FM Broadcast Booster Stations".

[53 FR 2498, Jan. 28, 1988]

§ 73.1015 Truthful written statements and responses to Commission inquiries and correspondence.

The Commission or its representatives may, in writing, require from any applicant, permittee, or licensee written statements of fact relevant to a determination whether an application should be granted or denied, or to a determination whether a license should be revoked, or to any other matter within the jurisdiction of the Commission, or, in the case of a proceeding to amend the FM or Television Table of Allotments, require from any person filing an expression of interest, written statements of fact relevant to that allotment proceeding. No applicant, permittee, licensee, or person who files an expression of interest shall in any response to Commission correspondence or inquiry or in any application, pleading, report or any other written statement submitted to the Commission, make any misrepresentation or willful material omission bearing on any matter within the jurisdiction of the Commission.

NOTE: Section 73.1015 is limited in application to written matter. It implies no change in the Commissions existing policies respecting the obligation of applicants, permittees and licensees in all instances to respond truthfully to requests for information deemed necessary to the proper execution of the Commission's functions.

[51 FR 3069, Jan. 23, 1986, as amended at 55 FR 28914, July 16, 1990]

EFFECTIVE DATE NOTE: At 55 FR 28914, July 16, 1990, § 73.1015 was amended by revising the introductory text, effective October 4, 1990. For the convenience of the user, the superseded text appears as follows:

§ 73.1015 Truthful written statements and responses to Commission inquiries and correspondence.

The Commission or its representatives may, in writing, require from any permittee or licensee written statements of fact relevant to a determination whether an application should be granted or denied, or to a determination whether a license should be revoked, or to some other matter within the jurisdiction of the Commission. No applicant, permittee or licensee shall in any response to Commission correspondence or inquiry or in any application, pleading, report or any other written statement submitted to the Commission, make any misrepresentative or willful material omission bearing on any matter within the jurisdiction of the Commission.

* * * * *

§ 73.1020 Station license period.

(a) Initial licenses for broadcast stations will ordinarily be issued for a period running until the date specified in this section for the State or Territory in which the station is located. If issued after such date, it will run to the next renewal date determined in accordance with this section. Radio broadcasting stations will ordinarily be renewed for 7 years and TV broadcast stations will be renewed for 5 years. However, if the FCC finds that the public interest, convenience and necessity will be served thereby, it may issue either an initial license or a renewal thereof for a lesser term. The time of expiration of normally issued initial and renewal licenses will be 3 a.m., local time, on the following dates and thereafter at 7-year intervals for radio broadcast stations and at 5-year intervals for TV broadcast stations located in:

(1) Maryland, District of Columbia, Virginia and West Virginia:

(i) Radio stations, October 1, 1988

(ii) Television stations, October 1, 1991

(2) North Carolina and South Carolina:

(i) Radio stations, December 1, 1988

(ii) Television stations, December 1, 1991

(3) Florida, Puerto Rico and the Virgin Islands:

(i) Radio stations, February 1, 1989

(ii) Television stations, February 1, 1992

(4) Alabama and Georgia:

(i) Radio stations, April 1, 1989

(ii) Television stations, April 1, 1992

(5) Arkansas, Louisiana and Mississippi:

(i) Radio stations, June 1, 1989

(ii) Television stations, June 1, 1992

(6) Tennessee, Kentucky and Indiana:

(i) Radio stations, August 1, 1989

(ii) Television stations, August 1, 1987

(7) Ohio and Michigan:

(i) Radio stations, October 1, 1989

(ii) Television stations, October 1, 1987

(8) Illinois and Wisconsin:

(i) Radio stations, December 1, 1989

(ii) Television stations, December 1, 1987

(9) Iowa and Missouri:

(i) Radio stations, February 1, 1990

(ii) Television stations, February 1, 1988

(10) Minnesota, North Dakota, South Dakota, Montana and Colorado:

(i) Radio stations, April 1, 1990

(ii) Television stations, April 1, 1988

(11) Kansas, Oklahoma and Nebraska:

(i) Radio stations, June 1, 1990

(ii) Television stations, June 1, 1988

(12) Texas:

(i) Radio stations, August 1, 1990

(ii) Television stations, August 1, 1988

(13) Wyoming, Nevada, Arizona, Utah, New Mexico and Idaho:

(i) Radio stations, October 1, 1990

(ii) Television stations, October 1, 1988

(14) California:

(i) Radio stations, December 1, 1990

(ii) Television stations, December 1, 1988

(15) Alaska, American Samoa, Guam, Hawaii, Mariana Islands, Oregon and Washington:

(i) Radio stations, February 1, 1991

(ii) Television stations, February 1, 1989

(16) Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont:

(i) Radio stations, April 1, 1991

(ii) Television stations, April 1, 1989

(17) New Jersey and New York:

(i) Radio stations, June 1, 1991

(ii) Television stations, June 1, 1989

(18) Delaware and Pennsylvania:

(i) Radio stations, August 1, 1991

(ii) Television stations, August 1, 1989

(b) For the cutoff date for the filing of applications mutually exclusive with, and petitions to deny, renewal applications, see § 73.3516(e).

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[46 FR 57051, Nov. 20, 1981 and 49 FR 4382, Feb. 6, 1984; 52 FR 25604, July 8, 1987]

§ 73.1030 Notifications concerning interference to radio astronomy, research and receiving installations.

(a) *Radio astronomy and radio research installations.* In order to minimize harmful interference at the National Radio Astronomy Observatory site located at Green, Pocahontas County, West Virginia, and at the Naval Radio Research Observatory at Sugar Grove, Pendleton County, West Virginia, a licensee proposing to operate a short-term broadcast auxiliary station pursuant to § 74.24, or an applicant for authority to construct a new broadcast station or for authority to make changes in the frequency, power, antenna height, or antenna directivity of an existing station within the area bounded by 39°15′ N on the north, 78°30′ W on the east, 37°30′ N on the south, and 80°30′ W on the west shall, at the time of filing such application with the FCC, simultaneously notify the following:

> Interference Office, National Radio Astronomy Observatory, P.O. Box 2, Green Bank, West Virginia 24944, Telephone: 304-456-2011.

The notification shall be in writing and set forth the particulars of the proposed station, including the geographical coordinates of the antenna, antenna height, antenna directivity if any, proposed frequency, type of emission and power. In addition, the applicant shall indicate in his application to the FCC the date notification was made to the observatory. After receipt of such applications, the FCC will allow a period of 20 days for comments or objections in response to the notifications indicated. If an objection to the proposed operation is received during the 20-day period from the National Radio Astronomy Observatory for itself or on behalf of the Naval Radio Research Observatory, the FCC will consider all aspects of the problem and take whatever action is deemed appropriate.

(b) *Radio receiving installations.* Protection for Table Mountain Radio Receiving Zone, Boulder County, Colorado: Applicants for a station authorization to operate in the vicinity of Boulder County, Colorado under this Part are advised to give due consider-

on, prior to filing applications, to
need to protect the Table Moun-
n Radio Receiving Zone from harm-
interference. These are the re-
rch laboratories of the Department
Commerce, Boulder County, Colora-
To prevent degradation of the
sent ambient radio signal level at
site, the Department of Commerce
ks to ensure that the field
engths of any radiated signals (ex-
ding reflected signals) received on
s 1800 acre site (within the area
nded by 40°09′10″ N Latitude on
north, 105°13′31″ W Longitude on
east, 40°07′05″ N Latitude on the
th, and 105°15′13″ W Longitude on
west) resulting from new assign-
nts (other than mobile stations) or
m the modification of relocation of
sting facilities do not exceed the
owing values:

Frequency range	Field strength [1]	Power flux density* [2]
w 540 kHz	10	−65.8
o 1600 kHz	20	−59.8
o 470 MHz	10	** −65.8
o 890 MHz	30	** −56.2
e 890 MHz	1	** −85.8

mV/m) in authorized bandwidth of service.
dBW/m²) in authorized bandwidth of service.
quivalent values of power flux density are calculated
ming free space characteristic impedance of
′=120 π ohms.
Space stations shall conform to the power flux density
at the earth's surface specified in appropriate parts of
FCC rules, but in no case should exceed the above
s in any 4 kHz band for all angles of arrival.

1) Advance consultation is recom-
nded particularly for those appli-
ts who have no reliable data which
icates whether the field strength or
ver flux density figures in the
ve table would be exceeded by
ir proposed radio facilities (except
bile stations). In such instances, the
owing is a suggested guide for de-
mining whether coordination is rec-
mended:

) All stations within 2.4 km (1.5
tute miles);

i) Stations within 4.8 km (3 statute
es) with 50 watts or more effective
iated power (ERP) in the primary
ne polarization in the azimuthal di-
tion of the Table Mountain Radio
ceiving Zone;

ii) Stations within 16 km (10 stat-
miles) with 1 kW or more ERP in
primary plane of polarization in
the azimuthal direction of Table Mountain Receiving Zone;

(iv) Stations within 80 km (50 statute miles) with 25 kW or more ERP in the primary plane polarization in the azimuthal direction of Table Mountain Receiving Zone.

(2) Applicants concerned are urged to communicate with the Radio Frequency Management Coordinator, Department of Commerce, Research Support Services, NOAA R/E5X2, Boulder Laboratories, Boulder, CO 80303; telephone (303) 497-6548, in advance of filing their applications with the Commission.

(3) The Commission will not screen applications to determine whether advance consultation has taken place. However, applicants are advised that such consultation can avoid objectimns from the Department of Commerce or proceedings to modify any authorization which may be granted which, in fact, delivers a signal at the site in excess of the field strength specified herein.

(c) *Protection for Federal Communications Commission monitoring stations.* (1) Applicants in the vicinity of a FCC monitoring station for a radio station authorization to operate new transmitting facilities or changed transmitting facilities which would increase the field strength produced over the monitoring station in excess of that previously authorized are advised to give consideration, prior to filing applications, to the possible need to protect the FCC stations from harmful interference. Geographical coordinates of the facilities which require protection are listed in § 0.121(c) of the FCC rules. Applications for stations (except mobile stations) which will produce on any frequency a direct wave fundamental field strength of *greater than 10 mV/m* in the authorized bandwidth of service (−65.8 dBW/m² power flux density assuming a free space characteristic impedance of 120 π ohms) at the referenced coordinates, may be examined to determine extent of possible interference. Depending on the theoretical field strength value and existing root-sum-square or other ambient radio field signal levels at the indicated coordinates, a clause protecting the monitoring station may be added to the station authorization.

(2) In the event that calculated value of expected field exceeds 10 mV/m (−65.8 dBW/m^2) at the reference coordinates, or if there is any question whether field strength levels might exceed the threshold value, advance consultation with the FCC to discuss any protection necessary should be considered. Prospective applicants may communicate with: Chief, Field Operations Bureau, Federal Communications Commission, Washington, D.C. 20554, Telephone (202) 632-6980.

(3) Advance consultation is suggested particularly for those applicants who have no reliable data which indicates whether the field strength or power flux density figure indicated would be exceeded by their proposed radio facilities (except mobile stations). In such instances, the following is a suggested guide for determining whether an applicant should coordinate:

(i) All stations within 2.4 kilometers (1.5 statute miles);

(ii) Stations within 4.8 kilometers (3 statute miles) with 50 watts or more average effective radiated power (ERP) in the primary plane of polarization in the azimuthal direction of the Monitoring Stations.

(iii) Stations within 16 kilometers (10 statute miles) with 1 kW or more average ERP in the primary plane of polarization in the azimuthal direction of the Monitoring Station;

(iv) Stations within 80 kilometers (50 statute miles) with 25 kW or more average ERP in the primary plane of polarization in the azimuthal direction of the Monitoring Station;

(4) Advance coordination for stations operating above 1000 MHz is recommended only where the proposed station is in the vicinity of a monitoring station designated as a satellite monitoring facility in § 0.121(c) of the Commission's Rules and also meets the criteria outlined in paragraphs (b)(2) and (3) of this section.

(5) The Commission will not screen applications to determine whether advance consultation has taken place. However, applicants are advised that such consultation can avoid objections from the Federal Communications Commission or modification of any a thorization which will cause harmf interference.

[43 FR 32782, July 28, 1978, as amended 44 FR 77167, Dec. 31, 1979; 47 FR 9221, Ma 4, 1982; 50 FR 39003, Sept. 26, 1985; 52 F 25867, July 9, 1987; 52 FR 36879, Oct 1987; 52 FR 37789, Oct. 9, 1987]

§ 73.1120 Station location.

(a) Each AM, FM and TV broadca station will be licensed to the princip community or other political subdiv sion which it primarily serves. Th principal community (city, town other political subdivision) will be co sidered to be the geographical statio location.

[44 FR 69934, Dec. 5, 1979, as amended FR 21685, June 9, 1987]

§ 73.1125 Station main studio location.

(a) Each AM, FM and TV broadca station shall maintain a main stud within the station's principal comm nity contour as defined in § 73.24(j) mV/m daytime contour), § 73.315(a and § 73.685(a), respectively, of th chapter, except

(1) AM stations licensed as synchr nous amplifier transmitters ("A boosters") or,

(2) An FM station whose main stud is located at the collocated ma studio-transmitter site of a commonl owned AM station licensed to th same principal community or,

(3) Any AM, FM or TV broadca station whose main studio is located the community to which the station licensed to serve at a point situate outside the principal community co tour or,

(4) AM, FM or TV stations, whe good cause exists for locating the ma studio outside the station's princip community contour and that to do would be consistent with the operati of the station in the public interest.

(b) Relocation of the main stud may be made:

(1) From one point to anoth within the principal community co tour or from a point outside the pri cipal community contour to o within it, without specific FCC autho ity, but notification to the FCC

Washington shall be made promptly; however,

(2) From a point within the principal community contour to one outside it or from one such point outside the community contour to another, only by first securing modification of construction permit or license (FCC Forms 301 for commercial stations and 340 for noncommercial educational stations.)

(3) Exceptions to paragraph (b)(2) of this section are:

(i) Relocation of the main studio of an FM station to the collocated main studio-transmitter site of a commonly-owned AM station licensed to the same principal community; and,

(ii) Relocation of the main studio from one point to another within the principal community of license or from a point outside the principal community to one within it.

(iii) Notification to the FCC in Washington shall be made promptly of such relocations described in paragraphs (b)(3) (i) and (ii) of this section.

(c) Each AM, FM and TV broadcast station shall maintain a local telephone number in its community of license or a toll-free number.

(d) Where the principal community to be served does not have specifically defined political boundaries, applications will be considered on a case-by-case basis by the FCC to determine if the main studio is located within the principal community to be served.

[52 FR 21685, June 9, 1987]

§ 73.1150 Transferring a station.

(a) In transferring a broadcast station, the licensee may retain no right of reversion of the license, no right to reassignment of the license in the future, and may not reserve the right to use the facilities of the station for any period whatsoever.

(b) No license, renewal of license, assignment of license or transfer of control of a corporate licensee will be granted or authorized if there is a contract, arrangement or understanding, express or implied, pursuant to which, as consideration or partial consideration for the assignment or transfer, such rights, as stated in paragraph (a) of this section, are retained.

[44 FR 58720, Oct. 11, 1979]

§ 73.1201 Station identification.

(a) *When regularly required.* Broadcast station identification announcements shall be made: (1) At the beginning and ending of each time of operation, and (2) hourly, as close to the hour as feasible, at a natural break in program offerings. Television broadcast stations may make these announcements visually or aurally.

(b) *Content.* (1) Official station identification shall consist of the station's call letters immediately followed by the community or communities specified in its license as the station's location: *Provided,* That the name of the licensee or the station's frequency or channel number, or both, as stated on the station's license may be inserted between the call letters and station location. No other insertion is permissible.

(2) A station may include in its official station identification the name of any additional community or communities, but the community to which the station is licensed must be named first.

(c) *Channel*—(1) *General.* Except as otherwise provided in this paragraph, in making the identification announcement the call letters shall be given only on the channel identified thereby.

(2) *Simultaneous AM-FM broadcasts.* If the same licensee operates an FM broadcast station and a AM broadcast station and simultaneously broadcasts the same programs over the facilities of both such stations, station identification announcements may be made jointly for both stations for periods of such simultaneous operation. If the call letters of the FM station do not clearly reveal that it is an FM station, the joint announcement shall so identify it.

(3) *Satellite operation.* When programming of a broadcast station is rebroadcast simultaneously over the facilities of a satellite station, the originating station may make identification announcements for the satellite station for periods of such simultaneous operation.

(i) In the case of a television broadcast station, such announcements, in addition to the information required by paragraph (b)(1) of this section, shall include the number of the channel on which each station is operating.

(ii) In the case of aural broadcast stations, such announcements, in addition to the information required by paragraph (b)(1) of this section, shall include the frequency on which each station is operating.

(d) *Subscription television stations (STV)*. The requirements for official station identification applicable to TV stations will apply to Subscription TV stations except, during STV-encoded programming such station identification is not required. However, a station identification announcement will be made immediately prior to and following the encoded Subscription TV program period.

[34 FR 19762, Dec. 17, 1969, as amended at 37 FR 23726, Nov. 8, 1972; 39 FR 6707, Feb. 22, 1974; 39 FR 9442, Mar. 11, 1974; 41 FR 29394, July 16, 1976; 47 FR 3791, Jan. 27, 1982; 48 FR 51308, Nov. 8, 1983]

§ 73.1202 Retention of letters received from the public.

(a) All written comments and suggestions received from the public by licensees of commercial AM, FM, and TV broadcast stations regarding operation of their station shall be maintained in the local public inspection file, unless the letter writer has requested that the letter not be made public or when the licensee feels that it should be excluded from public inspection because of the nature of its content, such as a defamatory or obscene letter.

(1) Letters shall be retained in the local public inspection file for three years from the date on which they are received by the licensee.

(2) Letters received by TV licensees only shall be placed in one of the following separated subject categories: programming or non-programming. If comments in a letter relate to both categories, the licensee shall file it under the category to which the writer has given the greater attention.

[44 FR 38846, July 3, 1979, as amended at 46 FR 26247, May 11, 1981; 52 FR 25867, July 9, 1987]

§ 73.1206 Broadcast of telephone conversations.

Before recording a telephone conversation for broadcast, or broadcasting such a conversation simultaneously with its occurrence, a licensee shall inform any party to the call of the licensee's intention to broadcast the conversation, except where such party is aware, or may be presumed to be aware from the circumstances of the conversation, that it is being or likely will be broadcast. Such awareness is presumed to exist only when the other party to the call is associated with the station (such as as employee or part-time reporter), or where the other party originates the call and it is obvious that it is in connection with a program in which the station customarily broadcasts telephone conversations.

[35 FR 7733, May 20, 1970]

§ 73.1207 Rebroadcasts.

(a) The term "rebroadcast" means reception by radio of the programs or other transmissions of a broadcast or any other type of radio station, and the simultaneous or subsequent retransmission of such programs or transmissions by a broadcast station.

(1) As used in this section, "program" includes any complete programs or part thereof.

(2) The transmission of a program from its point of origin to a broadcast station entirely by common carrier facilities, whether by wire line or radio, is not considered a rebroadcast.

(3) The broadcasting of a program relayed by a remote pickup broadcast station is not considered a rebroadcast.

(b) No broadcast station may retransmit the program, or any part thereof, of another U.S. broadcast station without the express authority of the originating station. A copy of the written consent of the licensee originating the program must be kept by the licensee of the station retransmitting such program and made available to the FCC upon request.

(1) Stations originating emergency communications under a Detailed State EBS Operation Plan are deemed to have conferred rebroadcast authority to other participating stations.

(2) Permission must be obtained from the originating station to rebroadcast any subsidiary communications transmitted by means of a multiplex subcarrier or the vertical blanking interval of a television signal.

(3) Programs originated by the Voice of America (VOA) and the Armed Forces Radio and Television Services (AFRTS) cannot, in general, be cleared for domestic rebroadcast, and may therefore be retransmitted only by special arrangements among the parties concerned.

(4) Except as otherwise provided by international agreement, programs originated by foreign broadcast stations may be retransmitted without the consent of the originating station.

(c) The transmissions of non-broadcast stations may be rebroadcast under the following conditions:

(1) Messages originated by privately-owned non-broadcast stations other than those in the Amateur and Citizens Band (CB) Radio Services may be broadcast only upon receipt of prior permission from the non-broadcast licensee. Additionally, messages transmitted by common carrier stations may be rebroadcast only upon prior permission of the originator of the message as well as the station licensee.

(2) Except as provided in paragraph (d) of this section, messages originated entirely by non-broadcast stations owned and operated by the Federal Government may be rebroadcast only upon receipt of prior permission from the government agency originating the messages.

(3) Messages originated by stations in the amateur and Citizens Band (CB) radio services may be rebroadcast at the discretion of broadcast station licensees.

(d) The rebroadcasting of time signals originated by the Naval Observatory and the National Bureau of Standards and messages from the National Weather Service stations is permitted without specific authorization under the following procedures:

(1) *Naval Observatory Time Signals.* (i) The time signals rebroadcast must be obtained by direct radio reception from a naval radio station, or by land line circuits.

(ii) Announcement of the time signal must be made without reference to any commercial activity.

(iii) Identification of the Naval Observatory as the source of the time signal must be made by an announcement, substantially as follows: "With the signal, the time will be . . . courtesy of the U.S. Naval Observatory."

(iv) Schedules of time signal broadcasts may be obtained upon request from the Superintendent, U.S. Naval Observatory, Washington, D.C. 20390.

(2) *National Bureau of Standards Time Signals.* (i) Time signals for rebroadcast must be obtained by direct radio reception from a National Bureau of Standards (NBS) station.

(ii) Use of receiving and rebroadcasting equipment must not delay the signals by more than 0.05 second.

(iii) Signals must be rebroadcast live, not from tape or other recording.

(iv) Voice or code announcements of the call signs of NBS stations are not to be rebroadcast.

(v) Identification of the origin of the service and the source of the signals must be made by an announcement substantially as follows: "At the tone, 11 hours 25 minutes *Coordinated Universal Time.* This is a rebroadcast of a continous service furnished by the National Bureau of Standards, Ft. Collins, Colo." No commercial sponsorship of this announcement is permitted and none may be implied.

(vi) Schedules of time signal broadcasts may be obtained from, and notice of use of NBS time signals for rebroadcast must be forwarded semi-annually to:

National Bureau of Standards, Radio Stations WWV/WWVB, 2000 East County Road 58, Ft. Collins, Colorado 80524.

(vii) In the rebroadcasting of NBS time signals, announcements will not state that they are standard frequency transmissions. Voice announcements of *Coordinated Universal Time* are given in voice every minute. Each minute, except the first of the hour, begins with an 0.8 second long tone of 1000 hertz at WWV and 1200 hertz tone at WWVH. The first minute of every hour begins with an 0.8 second long tone of 1500 hertz at both stations. This tone is followed by a 3-second pause, than the announcement, "National Bureau of Standards Time." This is followed by another 3-second pause before station identification. This arrangement allows broadcast stations sufficient time to retransmit the hour time tone and the words "National Bureau of Standards Time" either by manual or automatic switching.

(viii) Time signals or scales made up from integration of standard frequency signals broadcast from NBS stations may not be designated as national standard scales of time or attributed to the NBS as originator. For example, if a broadcasting station transmits time signals obtained from a studio clock which is periodically calibrated against the NBS time signals from WWV or WWVH, such signals may not be announced as NBS standard time or as having been originated by the NBS.

(3) *National Weather Service Messages.* (i) Messages of the National Weather Service must be rebroadcast within 1 hour of receipt.

(ii) If advertisements are given in connection with weather rebroadcast, these advertisements must not directly or indirectly convey an endorsement by the U.S. Government of the products or services so advertised.

(iii) Credit must be given to indicate that the rebroadcast message originates with the National Weather Service.

[44 FR 36040, June 20, 1979, as amended at 45 FR 26065, Apr. 17, 1980; 48 FR 28456, June 22, 1983; 50 FR 25246, June 18, 1985]

§ 73.1208 Broadcast of taped, filmed, or recorded material.

(a) Any taped, filmed or recorded program material in which time is of special significance, or by which an affirmative attempt is made to create the impression that it is occurring simultaneously with the broadcast, shall be announced at the beginning as taped, filmed or recorded. The language of the announcement shall be clear and in terms commonly understood by the public. For television stations, the announcement may be made visually or aurally.

(b) Taped, filmed, or recorded announcements which are of a commercial, promotional or public service nature need not be identified as taped, filmed or recorded.

[37 FR 23726, Nov. 8, 1972]

§ 73.1209 References to time.

Unless specifically designated as "standard (non-advanced)" or "advanced," all references to time contained in this part, and in license documents and other authorizations issued thereunder shall be understood to mean local time; i.e., the time legally observed in the community.

[39 FR 26736, July 23, 1974]

§ 73.1210 TV/FM dual-language broadcasting in Puerto Rico.

(a) For the purpose of this section, dual-language broadcasting shall be understood to mean the telecasting of a program in one language with the simultaneous transmission, on the main channel of a participating FM broadcast station, of companion sound track information in a different language.

(b) Television broadcast licensees in Puerto Rico may enter into dual-language time purchase agreements with FM broadcast licensees, subject to the following conditions:

(1) All such agreements shall be reduced to writing and retained by the licensee for possible Commission inspection, in accordance with § 73.3613 of this chapter.

(2) All such agreements shall specify that the FM licensee will monitor sound track material with a view to rejecting any material deemed to be inappropriate or objectionable for broadcast exposure.

(3) No television or FM broadcast station may devote more than 15 hours per week to dual-language broadcasting, nor may more than three (3) hours of such programming be presented on any given day.

(4) Noncommercial educational television broadcast stations using the facilities of commercial broadcast stations shall take all necessary precautions to assure that the entire operation is conducted on a noncommercial

basis and otherwise in accordance with § 73.621 of this part.

[40 FR 17259, Apr. 18, 1975, as amended at 49 FR 33663, Aug. 24, 1984; 50 FR 40016, Oct. 1, 1985]

§ 73.1211 Broadcast of lottery information.

(a) No licensee of an AM, FM, or television broadcast station, except as in paragraph (c) of this section, shall broadcast any advertisement of or information concerning any lottery, gift enterprise, or similar scheme, offering prizes dependent in whole or in part upon lot or chance, or any list of the prizes drawn or awarded by means of any such lottery, gift enterprise or scheme, whether said list contains any part or all of such prizes. (18 U.S.C. 1304, 62 Stat. 763).

(b) The determination whether a particular program comes within the provisions of paragraph (a) of this section depends on the facts of each case. However, the Commission will in any event consider that a program comes within the provisions of paragraph (a) of this section if in connection with such program a prize consisting of money or other thing of value is awarded to any person whose selection is dependent in whole or in part upon lot or chance, if as a condition of winning or competing for such prize, such winner or winners are required to furnish any money or other thing of value or are required to have in their possession any product sold, manufactured, furnished or distributed by a sponsor of a program broadcast on the station in question. (See 21 FCC 2d 846).

(c) The provisions of paragraphs (a) and (b) of this section shall not apply to an advertisement, list of prizes or other information concerning:

(1) A lottery conducted by a State acting under the authority of State law which is broadcast by a radio or television station licensed to a location in that State or any other State which conducts such a lottery. (18 U.S.C. 1307(a); 102 Stat. 3205).

(2) Fishing contests exempted under 18 U.S. Code 1305 (not conducted for profit, *i.e.*, all receipts fully consumed in defraying the actual costs of operation).

(3) Any gaming conducted by an Indian Tribe pursuant to the Indian Gaming Regulatory Act (25 U.S.C. 2701 *et seq.*)

(4) A lottery, gift enterprise or similar scheme, other than one described in paragraph (c)(1) of this section, that is authorized or not otherwise prohibited by the State in which it is conducted and which is:

(i) Conducted by a not-for-profit organization or a governmental organization (18 U.S.C. 1307(a); 102 Stat. 3205); or

(ii) Conducted as a promotional activity by a commercial organization and is clearly occasional and ancillary to the primary business of that organization. (18 U.S.C. 1307(a); 102 Stat. 3205).

(d)(1) For purposes of paragraph (c) of this section, "lottery" means the pooling of proceeds derived from the sale of tickets or chances and allotting those proceeds or parts thereof by chance to one or more chance takers or ticket purchasers. It does not include the placing or accepting of bets or wagers on sporting events or contests.

(2) For purposes of paragraph (c)(4)(i) of this section, the term "not-for-profit organization" means any organization that would qualify as tax exempt under section 501 of the Internal Revenue Code of 1986.

[40 FR 6210, Feb. 10, 1975, as amended at 45 FR 6401, Jan. 28, 1980; 54 FR 20856, May 15, 1989; 55 FR 18888, May 7, 1990]

§ 73.1212 Sponsorship identification; list retention; related requirements.

(a) When a broadcast station transmits any matter for which money, service, or other valuable consideration is either directly or indirectly paid or promised to, or charged or accepted by such station, the station, at the time of the broadcast, shall announce:

(1) That such matter is sponsored, paid for, or furnished, either in whole or in part, and

(2) By whom or on whose behalf such consideration was supplied: *Provided, however,* That "service or other valuable consideration" shall not include any service or property fur-

nished either without or at a nominal charge for use on, or in connection with, a broadcast unless it is so furnished in consideration for an identification of any person, product, service, trademark, or brand name beyond an identification reasonably related to the use of such service or property on the broadcast.

(i) For the purposes of this section, the term "sponsored" shall be deemed to have the same meaning as "paid for."

(b) The licensee of each broadcast station shall exercise reasonable diligence to obtain from its employees, and from other persons with whom it deals directly in connection with any matter for broadcast, information to enable such licensee to make the announcement required by this section.

(c) In any case where a report has been made to a broadcast station as required by section 507 of the Communications Act of 1934, as amended, of circumstances which would have required an announcement under this section had the consideration been received by such broadcast station, an appropriate announcement shall be made by such station.

(d) In the case of any political broadcast matter or any broadcast matter involving the discussion of a controversial issue of public importance for which any film, record, transcription, talent, script, or other material or service of any kind is furnished, either directly or indirectly, to a station as an inducement for broadcasting such matter, an announcement shall be made both at the beginning and conclusion of such broadcast on which such material or service is used that such film, record, transcription, talent, script, or other material or service has been furnished to such station in connection with the transmission of such broadcast matter: *Provided, however,* That in the case of any broadcast of 5 minutes' duration or less, only one such announcement need be made either at the beginning or conclusion of the broadcast.

(e) The announcement required by this section shall, in addition to stating the fact that the broadcast matter was sponsored, paid for or furnished, fully and fairly disclose the true identity of the person or persons, or corporation, committee, association or other unincorporated group, or other entity by whom or on whose behalf such payment is made or promised, or from whom or on whose behalf such services or other valuable consideration is received, or by whom the material or services referred to in paragraph (d) of this section are furnished. Where an agent or other person or entity contracts or otherwise makes arrangements with a station on behalf of another, and such fact is known or by the exercise of reasonable diligence, as specified in paragraph (b) of this section, could be known to the station, the announcement shall disclose the identity of the person or persons or entity on whose behalf such agent is acting instead of the name of such agent. Where the material broadcast is political matter or matter involving the discussion of a controversial issue of public importance and a corporation, committee, association or other unincorporated group, or other entity is paying for or furnishing the broadcast matter, the station shall, in addition to making the announcement required by this section, require that a list of the chief executive officers or members of the executive committee or of the board of directors of the corporation, committee, association or other unincorporated group, or other entity shall be made available for public inspection at the location specified by the licensee under § 73.3526 of this chapter. If the broadcast is originated by a network, the list may, instead, be retained at the headquarters office of the network or at the location where the originating station maintains its public inspection file under § 73.3526 of this chapter. Such lists shall be kept and made available for a period of two years.

(f) In the case of broadcast matter advertising commercial products or services, an announcement stating the sponsor's corporate or trade name, or the name of the sponsor's product, when it is clear that the mention of the name of the product constitutes a sponsorship identification, shall be deemed sufficient for the purpose of this section and only one such announcement need be made at any time during the course of the broadcast.

(g) The announcement otherwise required by section 317 of the Communications Act of 1934, as amended, is waived with respect to the broadcast of "want ad" or classified advertisements sponsored by an individual. The waiver granted in this paragraph shall not extend to a classified advertisement or want ad sponsorship by any form of business enterprise, corporate or otherwise. Whenever sponsorship announcements are omitted pursuant to this paragraph, the licensee shall observe the following conditions:

(1) Maintain a list showing the name, address, and (where available) the telephone number of each advertiser;

(2) Make this list available to members of the public who have a legitimate interest in obtaining the information contained in the list. Such list must be retained for a period of two years after broadcast.

(h) Any announcement required by section 317(b) of the Communications Act of 1934, as amended, is waived with respect to feature motion picture film produced initially and primarily for theatre exhibition.

NOTE: The waiver heretofore granted by the Commission in its Report and Order adopted November 16, 1960 (FCC 60-1369; 40 F.C.C. 95), continues to apply to programs filmed or recorded on or before June 20, 1963, when § 73.654, the predecessor television rule, went into effect.

(i) Commission interpretations in connection with the provisions of the sponsorship identification rules are contained in the Commission's Public Notice, entitled "Applicability of Sponsorship Identification Rules," dated May 6, 1963 (40 F.C.C. 141), as modified by Public Notice, dated April 21, 1975 (FCC 75-418). Further interpretations are printed in full in various volumes of the Federal Communications Commission Reports.

[40 FR 18400, Apr. 28, 1975, as amended at 46 FR 13907, Feb. 24, 1981; 49 FR 4211, Feb. 3, 1984; 49 FR 33663, Aug. 24, 1984; 50 FR 32417, Aug. 12, 1985]

§ 73.1213 Antenna structure, marking and lighting.

(a) The provisions of part 17 of this chapter (Construction, Marking and Lighting of Antenna Structures), require certain antenna structures be painted and/or lighted in accordance with the provisions of that part. (See §§ 17.47 tnrough 17.56.)

(b) The licensee or permittee of an AM, FM, or TV broadcast station, if the sole occupant of the antenna and/or the antenna supporting structure, is responsible for conforming to the requirements of §§ 17.47 through 17.56 of this chapter.

(c) If a common tower is used for antenna and/or antenna supporting purposes by more than one licensee or permittee of an AM, FM, or TV station or by one or more such licensees or permittees of any other service, each licensee or permittee shall be responsible for painting and lighting the structure when obstruction marking and lighting are required by FCC rules. However, each such licensee or permittee utilizing a common tower may designate one of the licensees or permittees as responsible for painting and lighting the structure. Such designated licensee or permittee shall be solely responsible for conforming to all FCC requirements of part 17 of this chapter regarding obstruction marking and lighting of antenna structures. (See §§ 17.47 through 17.56.) A copy of the agreement between the licensees or permittees must be retained in each licensee's or permittee' station file, available for inspection by FCC representatives. In the event of default by the designated licensee of his responsibility, each of the licensees or permittees shall again be individually responsible for conforming to the requirements of the rules, pending appointment of a new designated licensee responsible for conforming to these rules.

[40 FR 25461, June 16, 1975, as amended at 47 FR 40171, Sept. 13, 1982]

§ 73.1215 Specifications for indicating instruments.

The following requirements and specifications shall apply to indicating instruments used by broadcast stations:

(a) Linear scale instruments:

(1) Length of scale shall not be less than 2.3 inches (5.8 cm).

(2) Accuracy shall be at least 2 percent of the full scale reading.

(3) The maximum rating of the meter shall be such that it does not read off scale during modulation or normal operation.

(4) Scale shall have at least 40 divisions.

(5) Full scale reading shall not be greater than five times the minimum normal indication.

(b) Instruments having square-law scales:

(1) Meet the requirements of paragraphs (a) (1), (2), and (3) of this section for linear scale instruments.

(2) Full scale reading shall not be greater than three times the minimum normal indication.

(3) No scale division above one-third full scale reading shall be greater than one-thirtieth of the full scale reading. (Example: An ammeter meeting requirement (1) having full scale reading of 6 amperes is acceptable for reading currents from 2 to 6 amperes, provided no scale division between 2 and 6 amperes is greater than one-thirtieth of 6 amperes, 0.2 ampere.)

(c) Instruments having logarithmic scales:

(1) Meet the requirements of paragraphs (a) (1), (2), and (3) of this section for linear scale instruments.

(2) Full scale reading shall not be greater than five times the minimum normal indication.

(3) No scale division above one-fifth full scale reading (in watts) shall be greater than one-thirtieth of the full scale reading. (Example: A wattmeter meeting requirement (3) having full scale reading of 1,500 watts is acceptable for reading power from 300 to 1,500 watts, provided no scale division between 300 and 1,500 watts is greater than one-thirtieth of 1,500 watts or 50 watts.)

(d) Instruments having expanded scales:

(1) Shall meet the requirements of paragraphs (a) (1), (2), and (3) of this section for linear scale instruments.

(2) Full scale reading shall not be greater than five times the minimum normal indication.

(3) No scale division above one-fifth full scale reading shall be greater than one-fiftieth of the full scale reading. (Example: An ammeter meeting the requirement (1) is acceptable for indicating current from 1 to 5 amperes, provided no division between 1 and 5 amperes is greater than one-fiftieth of 5 amperes, 0.1 ampere.)

(e) Digital meters, printers, or other numerical readout devices may be used in addition to or in lieu of indicating instruments meeting the specifications of paragraphs (a), (b), (c), and (d) of this section. The readout of the device must include at least three digits and must indicate the value of the parameter being read to an accuracy of 2%. The multiplier, if any, to be applied to the reading of each parameter must be indicated at the operating position.

(f) No instrument which has been broken or appears to be damaged or defective, or the accuracy of which is questionable shall be used, until it has been checked, and if necessary repaired and recalibrated by the manufacturer or qualified instrument repair service. Repaired instruments shall not be used unless a certificate of calibration has been provided showing that the instrument conforms to the manufacturer's specifications for accuracy.

[41 FR 36818, Sept. 1, 1976; 41 FR 43152, Sept. 30, 1976, as amended at 51 FR 2707, Jan. 21, 1986]

§ 73.1216 Licensee-conducted contests.

A licensee that broadcasts or advertises information about a contest it conducts shall fully and accurately disclose the material terms of the contest, and shall conduct the contest substantially as announced or advertised. No contest description shall be false, misleading or deceptive with respect to any material term.

NOTE 1: For the purposes of this rule:

(a) A contest is a scheme in which a prize is offered or awarded, based upon chance, diligence, knowledge or skill, to members of the public.

(b) Material terms include those factors which define the operation of the contest and which affect participation therein. Al though the material terms may vary widely depending upon the exact nature of the contest, they will generally include: how to enter or participate; eligibility restrictions; entry deadline dates; whether prizes can be won; when prizes can be won; the extent, nature and value of prizes; basis for valuation of prizes; time and means of selection of winners; and/or tie-breaking procedures.

NOTE 2: In general, the time and manner of disclosure of the material terms of a contest are within the licensee's discretion. However, the obligation to disclose the material terms arises at the time the audience is first told how to enter or participate and continues thereafter. The material terms should be disclosed periodically by announcements broadcast on the station conducting the contest, but need not be enumerated each time an announcement promoting the contest is broadcast. Disclosure of material terms in a reasonable number of announcements is sufficient. In addition to the required broadcast announcements, disclosure of the material terms may be made in a non-broadcast manner.

NOTE 3: This rule is not applicable to licensee-conducted contests not broadcast or advertised to the general public or to a substantial segment thereof, to contests in which the general public is not requested or permitted to participate, to the commercial advertisement of non-licensee-conducted contests, or to a contest conducted by a non-broadcast division of the licensee or by a non-broadcast company related to the licensee.

[41 FR 43152, Sept. 30, 1976]

§ 73.1225 Station inspections by FCC.

(a) The licensee of a broadcast station shall make the station available for inspection by representatives of the FCC during the station's business hours, or at any time it is in operation.

(b) In the course of an inspection or investigation, an FCC representative may require special equipment tests, program tests or operation with nighttime or presunrise facilities during daytime hours pursuant to § 0.314, part 1, of the FCC rules.

(c) The following records shall be made available by all broadcast stations upon request by representatives of the FCC.

(1) Equipment performance measurements required by §§ 73.1590 and 73.1690.

(2) The written designations for chief operators and, when applicable, the contracts for chief operators engaged on a contract basis.

(3) Application for modification of the transmission system made pursuant to § 73.1690(c).

(4) Informal statements or drawings depicting any transmitter modification made pursuant to § 73.1690(e).

(5) Station logs and special technical records.

(d) Commercial and noncommercial AM stations must make the following information also available upon request by representatives of the FCC.

(1) Copy of the most recent antenna or common-point impedance measurements.

(2) Copy of the most recent field strength measurements made to establish performance of directional antennas required by § 73.151.

(3) Copy of the partial directional antenna proofs of performance made in accordance with § 73.154 and made pursuant to the following requirements:

(i) Section 73.68, Sampling systems for antenna monitors.

(ii) Section 73.69, Antenna monitors.

(iii) Section 73.61, AM directional antenna field strength and proof of performance measurements.

[43 FR 45846, Oct. 4, 1978; 43 FR 50683, Oct. 31, 1978, as amended at 51 FR 41629, Nov. 18, 1986; 51 FR 44478, Dec. 10, 1986]

§ 73.1226 Availability to FCC of station logs and records.

The following shall be made available to any authorized representative of the FCC upon request:

(a) Station records and logs shall be made available for inspection or duplication at the request of the FCC or its representative. Such logs or records may be removed from the licensee's possession by an FCC representative or, upon request, shall be mailed by the licensee to the FCC by either registered mail, return receipt requested, or certified mail, return receipt requested. The return receipt shall be retained by the licensee as part of the station records until such records or logs are returned to the licensee. A receipt shall be furnished when the logs or records are removed from the licensee's possession by an FCC representative and this receipt shall be retained by the licensee as part of the station records until such records or logs are returned to the licensee. When the FCC has no further need for such records or logs, they shall be returned to the licensee. The provisions of this rule shall apply solely to those station logs and records which are required to be maintained by the provisions of this chapter.

(1) Logs and records stored on microfilm, microfiche or other data-storage systems are subject to the requirements pertaining thereto found in § 73.1840(b).

(b) Where records or logs are maintained as the official records of a recognized law enforcement agency and the removal of the records from the possession of the law enforcement agency will hinder its law enforcement activities, such records will not be removed pursuant to this section if the chief of the law enforcement agency promptly certifies in writing to the FCC that removal of the logs or records will hinder law enforcement activities of the agency, stating insofar as feasible the basis for his decision and the date when it can reasonably be expected that such records will be released to the FCC.

(c) The following contracts, agreements, or understandings, which need not be filed with the FCC (per § 73.3613, Filing of contracts), must be kept at the station and made available for inspection by any authorized representative of the FCC upon request:

(1) Contracts relating to the sale of broadcast time to "time brokers" for resale.

(2) FM subchannel leasing agreements for subsidiary communications.

(3) Time sales contracts with the same sponsor for 4 or more hours per day, except where the length of the events (such as athletic contests, musical programs, and special events) broadcast pursuant to the contract is not under control of the station.

(4) Contracts with chief operators or other engineering personnel.

[43 FR 45847, Oct. 4, 1978; 43 FR 50683, Oct. 31, 1978, as amended at 45 FR 41151, June 18, 1980; 48 FR 28457, June 22, 1983]

§ 73.1230 Posting of station and opera licenses.

(a) The station license and any oth instrument of station authorizati shall be posted in a conspicuous pl and in such a manner that all ter are visible at the place the licens considers to be the principal cont point of the transmitter. At all oth control or ATS monitoring and ala points a photocopy of the station cense and other authorizations sh be posted.

(b) The operator license of each s tion operator employed full-time part-time or via contract, shall be p manently posted and shall rema posted so long as the operator is e ployed by the licensee. Operators e ployed at two or more stations, whi are not co-located, shall post their o erator license or permit at one of t stations, and a photocopy of the cense or permit at each other statio The operator license shall be post where the operator is on duty, eithe

(1) At the transmitter; or

(2) At the extension meter locatio or

(3) At the remote control point, the station is operated by remote co trol; or

(4) At the monitoring and alar point, if the station is using an aut matic transmission system.

(c) Posting of the operator licens and the station license and any othe instruments of authorization shall b done by affixing the licenses to th wall at the posting location, or by en closing them in a binder or folde which is retained at the posting loc tion so that the documents will b readily available and easily accessibl

[43 FR 45847, Oct. 4, 1978, as amended at 4 FR 29069, July 18, 1984]

§ 73.1250 Broadcasting emergency info mation.

(a) Emergency situations in whic the broadcasting of information is con sidered as furthering the safety of lif and property include, but are not lim ited to the following: Tornadoes, hur ricanes, floods, tidal waves, earth quakes, icing conditions, heavy snows widespread fires, discharge of toxi gasses, widspread power failures, industrial explosions, civil disorders and school closing and changes in school bus schedules resulting from such conditions. See also § 73.3542, Application for Emergency Authorization, for requirements involving emergency situations not covered by this section for which prior operating authority must be requested.

(b) If requested by responsible public officials, a station may, at its discretion, and without further FCC authority, transmit emergency point-to-point messages for the purpose of requesting or dispatching aid and assisting in rescue operations.

(c) If the Emergency Broadcast System (EBS) is activated for a national level emergency while a local or State level emergency operation is in progress, the national level EBS operation shall take precedence. If, during the broadcasting of local or State emergency information, the attention signal described in § 73.906 is used, the broadcasts are considered as being carried out under a State level or local level EBS operational plan.

(d) Any emergency operation undertaken in accordance with this section may be terminated by the FCC if required in the public interest.

(e) Immediately upon cessation of an emergency during which broadcast facilities were used for the transmission of point-to-point messages under paragraph (b) of this section, or when daytime facilities were used during nighttime hours by an AM station in accordance with paragraph (f) of this section, a report in letter form shall be forwarded to the FCC in Washington, DC, setting forth the nature of the emergency, the dates and hours of the broadcasting of emergency information, and a brief description of the material carried during the emergency. A certification of compliance with the noncommercialization provision of paragraph (f) of this section must accompany the report where daytime facilities are used during nighttime hours by an AM station, together with a detailed showing, under the provisisons of that paragraph, that no other broadcast service existed or was adequate.

(f) AM stations may, without further FCC authority, use their full daytime facilities during nighttime hours to broadcast emergency information (examples listed in paragraph (a) of this section), when necessary to the safety of life and property, in dangerous conditions of a general nature and when adequate advance warning cannot be given with the facilities authorized. Because of skywave interference impact on other stations assigned to the same channel, such operation may be undertaken only if regular, unlimited-time service, is non-existent, inadequate from the standpoint of coverage, or not serving the public need. All operation under this paragraph must be conducted on a noncommercial basis. Recorded music may be used to the extent necessary to provide program continuity.

(g) Broadcasting of emergency information shall be confined to the hours, frequencies, powers and modes of operation specified in the station license, except as otherwise provided for AM stations in paragraph (f) of this section.

(h) Any emergency information transmitted by a TV station in accordance with this section shall be transmitted both aurally and visually or only visually. TV stations may use any method of visual presentation which results in a legible message conveying the essential emergency information. Methods which may be used include, but are not necessarily limited to, slides, electronic captioning, manual methods (e.g., hand printing) or mechanical printing processes. However, when emergency operation is being conducted under a national, State or local level Emergency Broadcast System (EBS) plan, emergency information shall be transmitted both aurally and visually.

[43 FR 45847, Oct. 4, 1978, as amended at 50 FR 30947, July 31, 1985]

§ 73.1400 Remote control authorizations.

(a) An AM, FM, or TV station transmission system may be operated by remote control using the procedures described in § 73.1410.

(b) No authorization from the FCC is required to operate the transmission system of an AM station operating with a nondirectional antenna, FM station, or TV station by remote control. Authority to operate an AM station using a directional antenna system by remote control is obtained using the following procedures:

(1) An application for a construction permit to erect a new directional antenna or make modifications in an existing directional antenna, subject to the sampling system requirements of § 73.68, may request remote control authorization on the permit application FCC Form 301 (FCC Form 340 for noncommercial educational stations).

(2) A licensee or permittee having a sampling system in compliance with the provisions of § 73.68(a) must request remote control authorization on FCC Form 301-A, and submit information showing that the directional antenna sampling system has been constructed according to the specifications of § 73.68(a).

(3) A licensee or permittee of a station not having an approved directional sampling system in compliance with the provisions of § 73.68(a) must request remote control authorization on FCC Form 301-A, and submit information showing that the directional antenna is in proper adjustment and further showing the stability of the antenna system during the 1-year period specified in Section II of Form 301-A.

(c) Whenever a remote control point is established at a location other than at the main studio or transmitter, notification of that remote location must be sent to the FCC in Washington, DC, within 3 days of initial use of that point. This notification is not required if responsible station personnel may be contacted at the transmitter or studio site during hours of operation when the remote control operator is elsewhere.

[49 FR 47610, Dec. 6, 1984]

§ 73.1410 Remote control operation.

(a) Broadcast stations operated by remote control must provide at remote control points sufficient control and operating parameter monitoring capability to allow technical operation in compliance with the Rules applicable to that station and the terms of the station authorization. AM stations that are required to change modes of operation during the broadcast day must provide sufficient redundancy to assure that such mode changes actually occur.

(b) The remote control system must be designed, installed, and protected so that the transmitter can be activated or controlled only by licensed transmitter operators authorized by the licensee.

(c) The remote control and monitoring equipment must be calibrated and tested as often as necessary to ensure proper operation.

(d) The remote control system must be designed so that malfunctions in the circuits between the control point and transmitter will not cause the transmitter to be inadvertently activated or to change operating modes or output power.

(e) Whenever a malfunction causes loss of accurate indications of the transmitter operating parameters, use of remote control must be discontinued within 3 hours after the malfunction is first detected. If the station is found to be operating beyond the terms of the station authorization and such malfunction cannot be corrected by remote control, station operation must be immediately terminated.

(f) AM stations may use amplitude or phase modulation of the carrier wave for remote control telemetry and alarm purposes. FM stations may use aural subcarriers and TV stations may use either aural subcarriers or signals within the vertical blanking interval for telemetry and alarm purposes. Use of such remote control signals must be in accordance with the technical standards for the particular class of station.

[49 FR 47610, Dec. 6, 1984]

§ 73.1500 Automatic transmission system (ATS).

An automatic transmission system consists of monitoring devices, control, and alarm circuitry, arranged so that they interact automatically to operate a broadcast station's transmitter and maintain technical parameters within licensed values.

(a) Licensees of AM, FM, or TV broadcast stations may utilize an automatic transmission system (ATS) in lieu of either direct or remote control of the station transmitting system.

(b) No authorization from the FCC is required to operate the transmitter using an automatic transmission system. Prior to commencing use of the ATS, the station chief operator, technical director, or consulting engineer shall certify in writing to the station licensee that the system has been installed, tested, and fully complies with all prescribed technical standards of the Rules applicable to the particular class of station.

(c) Broadcast stations operating automatic transmission systems must be provided with one or more ATS duty operator points. Each such point shall have a means to turn the transmitting apparatus off at all times.

(d) Whenever an automatic transmission system duty operator point is established at a location other than at the main studio or transmitter, notification of that location must be sent to the FCC in Washington, DC, within 3 days of initial use of that point. This notification is not required if responsible station personnel may be contacted at the transmitter or studio site during hours of operation when the ATS duty operator is elsewhere.

(e) The ATS must incorporate circuits that will terminate station transmission within 3 minutes if the adjustment controls do not correct an operating condition which is capable of causing interference.

(f) The transmitting apparatus must be manually activated at the beginning of each broadcast period.

(g) For AM station operation the ATS may incorporate a means to transmit emergency information under the provisions of § 73.1250(f).

[51 FR 1377, Jan. 13, 1986]

§ 73.1510 Experimental authorizations.

(a) Licensees of broadcast stations may obtain experimental authorizations to conduct technical experimentation directed toward improvement of the technical phases of operation and service, and for such purposes may use a signal other than the normal broadcast program signal.

(b) Experimental authorizations may be requested by filing an informal application with the FCC in Washington, D.C., describing the nature and purpose of the experimentation to be conducted, the nature of the experimental signal to be transmitted, and the proposed schedule of hours and duration of the experimentation. Experimental authorizations shall be posted with the station license.

(c) Experimental operations are subject to the following conditions:

(1) The authorized power of the station may not be exceeded, except as specifically authorized for the experimental operations.

(2) Emissions outside the authorized bandwidth must be attenuated to the degree required for the particular type of station.

(3) The experimental operations may be conducted at any time the station is authorized to operate, but the minimum required schedule of programming for the class and type of station must be met. AM stations also may conduct experimental operations during the experimental period (12 midnight local time to local sunrise) and at additional hours if permitted by the experimental authorization provided no interference is caused to other stations maintaining a regular operating schedule within such period(s).

(4) If an experimental authorization permits the use of additional facilities or hours of operation for experimental purposes, no sponsored programs or commercial announcements may be transmitted during such experimentation.

(5) The licensee may transmit regularly scheduled programming concurrently with the experimental transmission if there is no significant impairment of service.

(6) No charges may be made, either directly or indirectly, for the experimentation; however, normal charges may be made for regularly scheduled programming transmitted concurrently with the experimental transmissions.

(d) The FCC may request a report of the research, experimentation and results at the conclusion of the experimental operation.

[43 FR 32783, July 28, 1978]

§ 73.1515 Special field test authorizations.

(a) A special field test authorization may be issued to conduct field strength surveys to aid in the selection of suitable sites for broadcast transmission facilities, determine coverage areas, or to study other factors influencing broadcast signal propagation. The applicant for the authorization must be qualified to hold a license under section 303(1)(1) of the Communications Act.

(b) Requests for authorizations to operate a transmitter under a Special field test authorization must be in writing using an informal application in letter form, signed by the applicant and including the following information:

(1) Purpose, duration and need for the survey.

(2) Frequency, transmitter output powers and time of operation.

(3) A brief description of the test antenna system, its estimated effective radiated field and height above ground or average terrain, and the geographic coordinates of its proposed location(s).

(c) Operation under a special field test authorization is subject to the following conditions:

(1) No objectionable interference will result to the operation of other authorized radio services; in this connection, the power requested shall not exceed that necessary for the purposes of the test.

(2) The carriers will be unmodulated except for the transmission of a test-pattern on a visual TV transmitter, and for hourly voice station identification on aural AM, FM and TV transmitters.

(3) The transmitter output power or antenna input power may not exceed those specified in the test authorization and the operating power must be maintained at a constant value for each phase of the tests.

(4) The input power to the final amplifier stage, and the AM antenna current or the FM or TV transmitter output power must be observed and recorded at half hour intervals and at any time that the power is adjusted or changed. Copies of these records must be submitted to the FCC with the required report.

(5) The test equipment may not be permanently installed, unless such installation has been separately authorized. Mobile units are not deemed permanent installations.

(6) Test transmitters must be operated by or under the immediate direction of an operator holding a commercial radio operator license (any class, unless otherwise endorsed).

(7) A report, containing the measurements, their analysis and other results of the survey shall be filed with the FCC in Washington, DC within sixty (60) days following the termination of the test authorization.

(8) The test transmission equipment, installation and operation thereof need not comply with the requirements of FCC rules and standards except as specified in this section if the equipment, installation and operation are consistent with good engineering principles and practices.

(d) A special field test authorization may be modified or terminated by notification from the FCC if in its judgment such action will promote the public interest, convenience and necessity.

[44 FR 58734, Oct. 11, 1979, as amended at 46 FR 35463, July 8, 1981; 49 FR 4211, Feb. 3, 1984; 49 FR 20670, May 16, 1984]

§ 73.1520 Operation for tests and maintenance.

(a) Broadcast stations may be operated for tests and maintenance of their transmitting systems on their assigned frequencies using their licensed operating power and antennas during their authorized hours of operation without specific authorization from the FCC.

(b) Licensees of AM stations may operate for tests and maintenance during the hours from 12 midnight local time to local sunrise, if no interference is caused to other stations maintaining a regular operating schedule within such period. No AM station licensed for "daytime" or "specified hours" of operation may broadcast any regular or scheduled programs during this period of test and maintenance operation.

(c) Licensees of AM stations may obtain special antenna test authorizations, and operate under the provisions described in § 73.157, to operate with nighttime facilities during daytime hours in conducting directional antenna field strength and antenna proof of performance measurements.

[43 FR 32783, July 28, 1978, as amended at 45 FR 6401, Jan. 28, 1980]

§ 73.1530 Portable test stations [Definition].

A portable test station is one that is moved from place to place for making field strength and ground conductivity measurements, for selecting station transmitter sites, and conducting other specialized propagation tests. Portable test stations are not normally used while in motion, and may not be used for the transmission of programs intended to be received by the public.

[43 FR 32783, July 28, 1978]

§ 73.1540 Carrier frequency measurements.

(a) The carrier frequency of each AM and FM station and the visual carrier frequency and the difference between the visual carrier and the aural carrier or center frequency of each TV station shall be measured or determined as often as necessary to ensure that they are maintained within the prescribed tolerances.

(b) In measuring the carrier frequency, the licensee may use any method or procedure that has sufficient precision to establish that the carrier frequency is within the prescribed departure limits.

(c) The primary standard of frequency for radio frequency measurements is the standard frequency maintained by the National Bureau of Standards or the standard signals of Stations WWV, WWVB, and WWVH of the National Bureau of Standards.

[43 FR 32783, July 28, 1978, as amended at 48 FR 44805, Sept. 30, 1983]

§ 73.1545 Carrier frequency departure tolerances.

(a) *AM stations.* The departure of the carrier frequency for monophonic transmissions or center frequency for stereophonic transmissions may not exceed ± 20 Hz from the assigned frequency.

(b) *FM stations.* (1) The departure of the carrier or center frequency of an FM station with an authorized transmitter output power more than 10 watts may not exceed ±2000 Hz from the assigned frequency.

(2) The departure of the carrier or center frequency of an FM station with an authorized transmitter output power of 10 watts or less may not exceed ±3000 Hz from the assigned frequency.

(c) *TV stations.* (1) The departure of the visual carrier frequency of a TV station may not exceed ±1000 Hz from the assigned visual carrier frequency.

(2) The departure of the aural carrier frequency of a TV station may not exceed ±1000 Hz from the actual visual carrier frequency plus exactly 4.5 MHz.

(d) *International broadcast stations.* The departure of the carrier frequency of an International broadcast station may not exceed 0.0015% of the assigned frequency on which the station is transmitting.

[44 FR 58734, Oct. 11, 1979; 44 FR 64408, Nov. 7, 1979, as amended at 47 FR 13165, Mar. 29, 1982]

§ 73.1550 Extension meters.

(a) A broadcast station may, without further authority from the FCC, install and use extension meters and monitoring devices *Provided:*

(1) The transmitter is in the same building as the normal operating location of the station's licensed operator and is no more than one floor above or below the normal operating location.

(2) The path from the normal operating location to the transmitter is no longer than 30.5 meters (100 feet) and provides the operator with ready access to the transmitter.

(3) The required extension meters and monitoring devices are sufficiently close to the operator's normal operating location that deviations from normal indications of such instruments can be observed from that location.

(4) The transmitter is installed and protected so it is not accessible to unauthorized persons.

(5) Each extension meter or monitoring device required for the type of

station, pursuant to paragraph (b) of this section, shall continuously sample the parameter for which it is installed and constantly indicate that parameter.

(6) Installation and operation of these meters shall be in accordance with the requirements prescribed for their corresponding regular meters and monitoring devices.

(7) Devices used for obtaining extension meter indications do not affect the accuracy of their corresponding regular meters.

(b) Extension metering and monitoring devices shall be installed as follows:

(1) *AM stations.* (i) Meters for indicating the DC input power of the last radio frequency power amplifier stage of the transmitter.

(ii) A meter for indicating non-directional antenna current or directional antenna common point current.

(iii) For stations using directional antenna systems, either the antenna monitor or external meters meeting the specifications for accuracy and repeatability prescribed for the monitor itself.

(2) *FM stations operating with transmitter output power more than 10 watts.* (i) Meters for indicating the DC input power to the last radio frequency power amplifier stage of the transmitter.

(ii) A meter for indicating the relative transmission line voltage, current or power.

(3) *FM stations operating with transmitter power of 10 watts or less.* (i) An indicator to show when the transmitter is in operation.

(4) *TV stations.* (i) Meters for indicating the DC input power to the last radio frequency power amplifier stages for the aural and visual transmitters.

(ii) Meters for indicating the relative transmission line voltage, current or power for the aural and visual transmitters.

(iii) Visual monitoring equipment suitable for monitoring the visual signal so that it may be maintained in accordance with the FCC requirments.

(c) The extension meters required, pursuant to paragraph (b) of this section, must be calibrated against their corresponding regular meters as often as necessary to ensure their accuracy, and,

(1) In no event shall an extension meter be calibrated against another remote or extension meter.

(2) Each extension meter shall be accurate to within 2 percent of the value read on its corresponding regular meter.

(3) For AM stations, such calibrations shall be made for each mode of operation.

(d) If a malfunction of any component of the extension metering or monitoring system causes inaccurate readings, the following procedures shall apply:

(1) *All stations.* If the malfunction affects the meters for indicating the DC input power to the last radio stage of the transmitter power amplifier, the indications must be read at the transmitter.

(2) *AM stations.* In addition to paragraph (d)(1) of this section, if the malfunction affects the extension indications of antenna or common point ammeter, the operating power may be determined by the indirect method using the procedures described in § 73.51(e for a period not to exceed 60 days. Alternatively, the operating power may be determined by the direct method on a continued basis by reading the regular antenna or common point ammeter for each mode of operation until the defective extension metering is repaired.

(3) *FM stations.* In addition to paragraph (d)(1) of this section, if the malfunction affects the transmission line meter, the indications must be read at the transmitter.

(4) *TV stations.* In addition to paragraph (d)(1) of this section, if the malfunction affects the transmission line meter(s), indications must be read at the transmitter. If the malfunction affects the indications of the visual monitoring equipment, the licensee must, pending repair or replacement, provide other suitable means for monitoring visual modulation at the extension meter location.

(e) If a malfunctioning component cannot be repaired or replaced within 60 days from the date faulty operation is detected, the Engineer-in-Charge of the radio district in which the station is located must be notified and request made for such additional time as is needed to complete the necessary repairs or replacement.

[43 FR 45848, Oct. 4, 1978, as amended at 48 FR 36463, Aug. 11, 1983; 48 FR 38480, Aug. 24, 1983; 50 FR 23709, June 5, 1985; 50 FR 32417, Aug. 12, 1985; 50 FR 40016, Oct. 1, 1985]

§ 73.1560 Operating power and mode tolerances.

(a) *AM stations.* (1) Except as provided for in paragraph (d) of this section, the antenna input power of an AM station as determined by the procedures specified in § 73.51 must be maintained as near as is practicable to the authorized antenna input power and may not be less than 90% nor more than 105% of the authorized power.

(2) Whenever the transmitter of an AM station cannot be placed into the specified operating mode at the time required, transmissions of the station must be immediately terminated. However, if the radiated field at any bearing or elevation does not exceed that permitted for that time of day, operation in the mode with the lesser radiated field may continue under the notification procedures of paragraph (d) of this section.

(b) *FM stations.* Except as provided in paragraph (d) of this section, the transmitter output power of an FM station, with power output as determined by the procedures specified in § 73.267, which is authorized for output power more than 10 watts must be maintained as near as practicable to the authorized transmitter output power and may not be less than 90% nor more than 105% of the authorized power. FM stations operating with authorized transmitter output power of 10 watts or less, may operate at less than the authorized power, but not more than 105% of the authorized power.

(c) *TV stations.* (1) Except as provided in paragraph (d) of this section, the visual output power of a TV transmitter, as determined by the procedures specified in § 73.663, must be maintained as near as is practicable to the authorized transmitter output power and may not be less than 80% nor more than 110% of the authorized power.

(2) The output power of the aural transmitter shall be maintained to provide an aural carrier ERP not to exceed 22% of the peak authorized visual ERP.

(3) The FCC may specify deviation from the power of tolerance requirements for subscription television operations to the extent it deems necessary to permit proper operation.

(d) *Reduced power operation.* In the event it becomes technically impossible to operate with the authorized power, a broadcast station may operate at reduced power for a period of not more than 30 days without specific authority from the FCC. If operation at reduced power will exceed 10 consecutive days, a notification must be sent to the FCC in Washington, D.C., not later than the 10th day of the lower power operation. In the event the normal power is restored prior to the expiration of the 30 day period, the licensee must notify the FCC upon restoration of normal operation. If causes beyond the control of the licensee prevent restoration of authorized power within 30 days, an informal written request must be made to the FCC in Washington, DC, no later than the 30th day for the additional time as may be necessary.

[44 FR 58734, Oct. 11, 1979, as amended at 49 FR 22093, May 25, 1984; 49 FR 29069, July 18, 1984; 49 FR 47610, Dec. 6, 1984; 50 FR 26568, June 27, 1985; 50 FR 40015, Oct. 1, 1985]

§ 73.1570 Modulation levels: AM, FM, and TV aural.

(a) The percentage of modulation is to be maintained at as high a level as is consistent with good quality of transmission and good broadcast service, with maximum levels not to exceed the values specified in paragraph (b). Generally, the modulation should not be less than 85% on peaks of frequent recurrence, but where lower modulation levels may be required to avoid objectionable loudness or to maintain the dynamic range of the program material, the degree of modulation may be reduced to whatever level is necessary for this purpose, even though under such circumstances, the level may be substantially less than that which produces peaks of frequent recurrence at a level of 85%.

(b) Maximum modulation levels must meet the following limitations:

(1) *AM stations.* In no case shall the amplitude modulation of the carrier wave exceed 100% on negative peaks of frequent recurrence, or 125% on positive peaks at any time.

(i) AM stations transmitting stereophonic programs not exceed the AM maximum stereophonic transmission signal modulation specifications of stereophonic system in use.

(ii) AM stations transmitting telemetry signals for remote control or automatic transmission system operation must meet the modulation limitations of § 73.142(j).

(2) *FM Stations.* The total modulation must not exceed 100 percent on peaks of frequent reoccurrence referenced to 75 kHz deviation. However, stations providing subsidiary communications services using subcarriers under provisions of § 73.319 concurrently with the broadcasting of stereophonic or monophonic programs may increase the peak modulation deviation as follows:

(i) The total peak modulation may be increased 0.5 percent for each 1.0 percent subcarrier injection modulation.

(ii) In no event may the modulation of the carrier exceed 110 percent (82.5 kHz peak deviation).

(3) TV station. In no case shall the total moduiation of the aural carrier exceed 100% on peaks of frequent recurrence, unless some other peak modulation level is specified in an instrument of authorization. For monophonic transmissions, 100% modulation is defined as ±25 kHz.

(c) If a limiting or compression amplifier is employed to maintain modulation levels, precaution must be taken so as not to substantially alter the dynamic characteristics of programs.

[44 FR 58735, Oct. 11, 1979, as amended at 47 FR 13165, Mar. 29, 1982; 49 FR 14508, Apr. 12, 1984; 49 FR 15081, Apr. 17, 1984; 49 FR 27147, July 2, 1984; 49 FR 47610, Dec. 6, 1984; 49 FR 48312, Dec. 12, 1984; 51 FR 26251, July 22, 1986]

§ 73.1580 Transmission system inspections.

Each AM, FM, and TV station licensee or permittee must conduct a complete inspection of the transmitting system and all required monitors as often as necessary to ensure proper station operation.

[48 FR 38481, Aug. 24, 1983]

§ 73.1590 Equipment performance measurements.

(a) The licensee of each AM, FM and TV station, except licensees of Class D non-commercial educational FM stations authorized to operate with 10 watts or less output power, must make equipment performance measurements for each main transmitter as follows:

(1) Upon initial installation of a new or replacement main transmitter.

(2) Upon modification of an existing transmitter made under the provisions of § 73.1690, Modification of transmission systems, and specified therein.

(3) Installation of AM stereophonic transmission equipment pursuant to § 73.128.

(4) Installation of FM subcarrier or stereophonic transmission equipment pursuant to § 73.295, § 73.297, § 73.593 or § 73.597.

(5) Installation of TV stereophonic or subcarrier transmission equipment pursuant to §§ 73.669 and 73.1690.

(6) Annually, for AM stations, with not more than 14 months between measurements.

(7) When required by other provisions of the rules or the station license.

(b) Measurements for spurious and harmonic emissions must be made to show compliance with the transmission system requirements of § 73.44 for AM stations; § 73.317 for FM stations and § 73.687 for TV stations. Measurements must be made under all conditions of modulation expected to be encountered by the station whether transmitting monophonic or stereophonic programs and providing subsidiary communications services.

(c) TV visual equipment performance measurements must be made with the equipment adjusted for normal program operation at the transmitter antenna sampling port to yield the following information:

(1) Field strength or voltage of the lower side-band for a modulating frequency of 1.25 MHz or greater, (including 3.58 MHz for color), and of the upper side-band for a modulating frequency of 4.75 MHz or greater.

(2) Data showing that the waveform of the transmitted signal conforms to that specified by the standards for TV transmissions.

(3) Photographs of a test pattern taken from a receiver or monitor connected to the transmitter output.

(4) Data showing envelope delay characteristics of the radiated signal.

(5) Data showing the attenuation of spurious and harmonic radiation, if, after type acceptance, any changes have been made in the transmitter or associated equipment (filters, multiplexer, etc.) which could cause changes in its radiation products.

(d) The data required by paragraphs (b) and (c) of this section, together with a description of the equipment and procedure used in making the measurements, signed and dated by the qualified person(s) making the measurements, must be kept on file at the transmitter or remote control point for a period of 2 years, and on request must be made available during that time to duly authorized representatives of the FCC.

[47 FR 8589, Mar. 1, 1982, as amended at 51 FR 18450, May 20, 1986]

§ 73.1610 Equipment tests.

(a) During the process of construction of a new broadcast station, the permittee, after notifying the FCC in Washington, D.C. may, without further authority from the FCC, conduct equipment tests for the purpose of making such adjustments and measurements as may be necessary to assure compliance with the terms of the construction permit, the technical provisions of the application therefore, the rules and regulations and the applicable engineering standards. For AM stations, equipment tests, including either a directional or nondirectional proof of performance required by the construction permit, may be conducted during daytime hours provided that the antenna system is first substantially tuned during the experimental period. The nondirectional proof shall be conducted with power adjusted to 25% of that specified in the permit for the authorized directional facilities or, if applicable, to such higher power as is specified in the same permit for authorized nondirectional facilities. For licensed stations, see § 73.1615, Operation During Modification of Facilities; and § 73.157, Antenna Testing During Daytime.

(b) The FCC may notify the permittee not to conduct equipment tests or may modify, cancel, suspend, or change the modes of testing or the dates and times for such tests in order to resolve interference complaints or when such action may appear to be in the public interest, convenience, and necessity.

(c) Equipment tests may be continued so long as the construction permit shall remain valid.

(d) The authorization for tests embodied in this section shall not be construed as constituting a license to operate but as a necessary part of construction.

[43 FR 32783, July 28, 1978, as amended at 47 FR 40174, Sept. 13, 1982; 50 FR 30947, July 31, 1985]

§ 73.1615 Operation during modification of facilities.

When the licensee of an existing AM, FM or TV station is in the process of modifying existing facilities as authorized by a construction permit and determines it is necessary to either discontinue operation or to operate with temporary facilities to continue program service, the following procedures apply:

(a) Licensees holding a construction permit for modification of directional or nondirectional FM and TV or nondirectional AM station facilities may, without specific FCC authority, for a period not exceeding 30 days:

(1) Discontinue operation, or

(2) Operate with temporary facilities to maintain, as nearly as possible, but not exceed, the size of the presently licensed coverage area.

(b) Licensees of an AM station holding a construction permit which involves directional facilities and which does not involve a change in operating frequency may, without specific FCC authority, for a period not exceeding 30 days:

(1) Discontinue operation, or

(2) Operate with reduced power or with parameters at variance from licensed tolerances while maintaining monitoring point field strengths within licensed limits during the period subsequent to the commencement of modifications authorized by the construction permit, or

(3) Operate in a nondirectional mode during the presently licensed hours of directional operation with power reduced to 25% or less of the nominal licensed power, or whatever higher power, not exceeding licensed power, will insure that the radiated field strength specified by the license is not exceeded at any given asimuth for the corresponding hours of directional operation, or

(4) Operate in a nondirectional mode during daytime hours, if not already so licensed, only as necessary to conduct a required nondirectional proof of performance with a power not to exceed 25% of the maximum power authorized by the construction permit for directional operation, or

(5) Operate during daytime hours with either the daytime or nighttime directional pattern and with the power authorized by the construction permit only as necessary to take proof of performance measurements. Operating power shall be promptly reduced to presently licensed level during any significant period of time that these measurements are not being taken. No daytime operation of construction permit directional patterns authorized by this paragraph shall be conducted before such patterns have been substantially tuned during the experimental period.

(6) In the event the directional pattern authorized by the construction permit replaces a licensed directional pattern, the licensee may operate with the substantially adjusted construction permit pattern during the corresponding licensed hours of directional operation with power not exceeding that specified for the licensed pattern.

(c) Such operation or discontinuance of operation in accordance with the provisions of paragraph (a) or (b) of this section may begin upon notification to the FCC in Washington, DC.

(1) Should it be necessary to continue the procedures in either paragraph (a) or (b) of this section beyond 30 days, an informal letter request signed by the licensee or the licensee's representative must be sent to the FCC in Washington, DC. prior to the 30th day.

(d) Licensees of an AM station holding a construction permit which authorizes both a change in frequency and directional facilities must request and obtain authority from the FCC in Washington, DC. prior to using any new installation authorized by the permit, or using temporary facilities.

(1) The request is to be made at least 10 days prior to the date on which the temporary operation is to commence. The request is to be made by letter which shall describe the operating modes and facilities to be used. Such letter requests shall be signed by the licensee or the licensee's representative.

(2) Discontinuance of operation is permitted upon notification to the FCC In Washington, DC. Should it be necessary to discontinue operation longer than 30 days, an informal letter request, signed by the licensee or the licensee's representatives, must be sent to the FCC in Washington, DC prior to the 30th day.

(e) The FCC may modify or cancel the temporary operation permitted under the provisions of paragraph (a), (b), (c) or (d) of this section without prior notice or right to hearing.

[50 FR 30947, July 31, 1985]

§ 73.1620 Program tests.

(a) Upon completion of construction of an AM, FM or TV station in accordance with the terms of the construction permit, the technical provisions of the application, the rules and regulations and the applicable engineering standards, program tests may be conducted in accordance with the following:

(1) The permittee of a nondirectional AM or FM station, or a nondirectional or directional TV station, may begin program tests upon notification

to the FCC in Washington, DC provided that within 10 days thereafter, an application for a license is filed with the FCC in Washington, DC.

(2) The permittee of an AM or FM station with a directional antenna system must file an application for license requesting program test authority with the FCC in Washington, DC at least 10 days prior to the date on which it desires to begin program tests. Also, an antenna proof of performance must be filed with the request by an AM or FM station with a directional antenna.

(b) The FCC reserves the right to revoke or suspend program tests by any station without right of hearing for failure to comply adequately with all terms of the construction permit or in order to resolve instances of objectionable interference.

(c) Unless sooner suspended or revoked, the program test authority continues valid during FCC consideration of the application for license, and during this period further extension of the construction permit is not required. Program test authority shall be automatically terminated by final determination upon the application for station license.

(d) All operation under program test authority shall be in strict compliance with the rules governing broadcast stations and in strict accordance with representations made in the application for license pursuant to which the tests were authorized.

(e) Acceptance by the FCC of notification of the station of program tests, or the granting of program test authority by the FCC, is not to be construed by the permittee as approval by the FCC of the application for station license.

(f) The licensee of a UHF TV station which is not in operation on, but assigned to, the same allocated channel which a 1000 watt UHF translator station is authorized to use (see § 73.3516, "Specification of facilities"), shall notify the licensee of the translator station, in writing, at least 10 days prior to commencing or resuming operation. The TV station licensee shall also certify to the FCC in Washington, DC that such advance notice has been given to the translator station licensee.

[43 FR 32784, July 28, 1978, as amended at 45 FR 6401, Jan. 28, 1980; 47 FR 28388, June 30, 1982; 49 FR 38132, Sept. 27, 1984]

§ 73.1635 Special temporary authorizations (STA).

(a) A special temporary authorization (STA) is the authority granted to a permittee or licensee to permit the operation of a broadcast facility for a limited period at a specified variance from the terms of the station authorization or requirements of the FCC rules applicable to the particular class of station.

(1) A request for a STA should be filed with FCC in Washington, DC at least 10 days prior to the date of the proposed operation.

(2) The request is to be made by letter and shall fully describe the proposed operation and the necessity for the requested STA. Such letter requests shall be signed by the licensee or the licensee's representative.

(3) A request for a STA necessitated by unforeseen equipment damage or failure may be made without regard to the procedural requirements of this section (e.g. via telegram or telephone). Any request made pursuant to this paragraph shall be followed by a written confirmation request conforming to the requirements of paragraph (a)(2) of this section. Confirmation requests shall be submitted within 24 hours. (See also § 73.1680 Emergency Antennas).

(4) An STA may be granted for an initial period not to exceed 180 days. A limited number of extensions of such authorizations may be granted for additional periods not exceeding 180 days per extension. An STA necessitated by technical or equipment problems, however, may, in practice, be granted for an initial period not to exceed 90 days with a limited number of extensions not to exceed 90 days per extension. The permittee or licensee must demonstrate that any further extensions requested are necessary and that all steps to resume normal operation are being undertaken an in expeditious and timely fashion.

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(5) Certain rules permit temporary operation at variance without prior authorization from the FCC when notification is filed as prescribed in the particular rules. See § 73.62, Directional Antenna System Tolerances; § 73.157, Antenna Testing During Daytime: § 73.1250, Broadcasting Emergency Information; § 73.1615, Operation During Modification of Facilities; and § 73.1680, Emergency Antennas.

(b) An STA may be modified or cancelled by the FCC without prior notice or right to hearing.

(c) No request by an AM station for temporary authority to extend its hours of operation beyond those authorized by its regular authorization will be accepted or granted by the FCC except in emergency situations conforming with the requirements of § 73.3542, Application for Emergency Authorization. See also § 73.1250, Broadcasting Emergency Information.

[50 FR 30948, July 31, 1985

§ 73.1650 International agreements.

(a) The rules in this part 73, and authorizations for which they provide, are subject to compliance with the international obligations and undertakings of the United States. Accordingly, all provisions in this part 73 are subject to compliance with applicable requirements, restrictions, and procedures accepted by the United States that have been established by or pursuant to treaties or other international agreements, arrangements, or understandings to which the United States is a signatory, including applicable annexes, protocols, resolutions, recommendations and other supplementing documents associated with such international instruments.

(b) The United States is a signatory to the following treaties and other international agreements that relate, in whole or in part, to AM, FM or TV broadcasting:

(1) The following instruments of the International Telecommunication Union:

(i) Constitution.

(ii) Convention.

(iii) Radio Regulations.

(2) Regional Agreement for the MF Broadcasting Service in Region 2 (Rio de Janeiro, 1981).

(3) Bi-lateral Agreements between the United States and Canada relating to:

(i) AM Broadcasting.

(ii) FM Broadcasting.

(iii) TV Broadcasting.

(4) Bi-lateral Agreements between the United States and Mexico relating to:

(i) AM Broadcasting.

(ii) FM Broadcasting.

(iii) TV Broadcasting.

(5) Bi-lateral Agreement between the United States and the Bahama Islands relating to presunrise operations by AM stations.

(6) North American Regional Broadcasting Agreement (NARBA), which, for the United States, remains in effect with respect to the Dominican Republic and the Bahama Islands.

The documents listed in this paragraph are available for inspection in the office of the Chief, Policy and Rules Division, Mass Media Bureau, FCC, Washington, DC. Copies may be purchased from the FCC Copy Contractor, whose name may be obtained from the FCC Consumer Assistance Office.

[54 FR 39737, Sept. 28, 1989]

§ 73.1660 Acceptability of broadcast transmitters.

(a) An AM, FM or TV transmitter may be type accepted or notified upon the request of any manufacturer of transmitters following the procedures described in Part 2 of the FCC Rules. If acceptable, the transmitter will be included in the FCC's "Radio Equipment List, Equipment Acceptable for Licensing." Since March 5, 1984, these transmitters have been authorized under notification.

(b) A permittee or licensee planning to install and use as a main transmitter one not included on the FCC's "Radio Equipment List" must obtain authority to use such a transmitter by filing for a construction permit on FCC Form 301 (FCC Form 340 for noncommercial educational stations). The application must include a complete description and circuit diagram of the transmitter, description of the carrier frequency determining circuits, complete operating parameters, and measurement data as would be required for a grant of type acceptance. A permittee or licensee planning to modify a transmitter which is included on the FCC's "Radio Equipment List" or for which an FCC Form 301 has been submitted and approved, must follow the requirements contained in § 73.1690.

(c) A transmitter which was in use prior to January 30, 1955, may continue to be used by the licensee, and successors or assignees, if it continues to comply with the technical requirements for the type of station at which it is used.

(d) AM stereophonic exciter-generators for interfacing with type accepted or notified AM transmitters may be type accepted upon request from any manufacturer by the procedures described in part 2 of the FCC Rules. Broadcast licensees may modify their type accepted AM stereophonic exciter-generators in accordance with § 73.1690.

(e) Additional rules covering type acceptance and notification, modification of authorized transmitters, and withdrawal of a grant of authorization are contained in part 2 of the FCC Rules.

[43 FR 53740, Nov. 17, 1978, as amended at 49 FR 4000, Feb. 1, 1984; 51 FR 18451, May 20, 1986; 51 FR 41629, Nov. 18, 1986; 51 FR 44478, Dec. 10, 1986]

§ 73.1665 Main transmitters.

(a) Each AM, FM and TV broadcast station must have at least one main transmitter which complies with the provisions of the transmitter technical requirements for the type and class of station. A main transmitter is one which is used for regular program service having power ratings appropriate for the authorized operating power(s).

(b) There is no maximum power rating limit for FM or TV station transmitters, however, the maximum rated transmitter power of a main transmitter installed at an AM station shall be as follows:

Authorized power	Maximum rated transmitter power (kW)
0.25, 0.5, or 1 kW	1
2.5 kW	5
5 or 10 kW	10
25 or 50 kW	50

(c) A licensee may, without further authority or notification to the FCC, replace an existing main transmitter or install additional main transmitter(s) for use with the authorized antenna if the replacement or additional transmitter(s) is type accepted or notified as shown in the FCC's "Radio Equipment List". Within 10 days after commencement of regular use of the replacement or additional transmitter(s), equipment performance measurements, as prescribed for the type of station are to be completed.

[43 FR 53741, Nov. 17, 1978, as amended at 47 FR 8590, Mar. 1, 1982; 47 FR 28388, June 30, 1982; 49 FR 4000, Feb. 1, 1984; 51 FR 18451, May 20, 1986]

§ 73.1670 Auxiliary transmitters.

(a) A licensee of a broadcast station may, without further authority from the FCC, install and use with the main antenna system one or more auxiliary transmitters for the following purposes:

(1) The transmission of regular programs upon failure of the main transmitter.

(2) The transmission of regular programs during maintenance or modification of the main transmitter.

(3) Emergency broadcast system operation.

(4) The transmission of regular programs by an AM station authorized for Presunrise (PSRA) and/or Postsunset (PSSA) operation.

(5) The transmission of tests to determine the operating condition of the auxiliary transmitter or auxiliary antenna.

(6) For testing, upon the request of representatives of the FCC.

(b) Authorization to install an auxiliary transmitter for use with other than the main antenna or authorized auxiliary antenna must be obtained by filing an application for a construction permit on FCC form 301 (FCC form 340 for noncommercial educational stations).

(c) The following technical and operating standards apply to auxiliary transmitters:

(1) The auxiliary transmitter may be operated on only the station's authorized frequency and within the required carrier frequency departure tolerance for the type of station.

(2) The carrier frequency of the auxiliary transmitter must be measured as often as necessary to ensure that it is maintained within the prescribed tolerance.

(3) When using an auxiliary transmitter, the operating power may be less than the authorized power but may not exceed the authorized power within the permitted tolerance for the type of station. If operation with an auxiliary transmitter at reduced power continues for a period exceeding 10 days, the FCC in Washington, DC must be notified. (See § 73.51, AM; § 73.267, FM; § 73.567, NCE-FM; and § 73.663, TV).

(4) Normal operator requirements apply to the operation of the auxiliary transmitter.

NOTE: After January 1, 1979, new licenses will not be issued nor will existing licenses be renewed for auxiliary transmitters that are operated into the main antenna system.

[43 FR 53741, Nov. 17, 1978, as amended at 44 FR 22740, Apr. 17, 1979; 48 FR 36463, Aug. 11, 1983; 48 FR 42960, Sept. 20, 1983; 48 FR 44806, Sept. 30, 1983; 50 FR 32417, Aug. 12, 1985; 51 FR 32088, Sept. 9, 1986]

§ 73.1675 Auxiliary antennas.

(a) An auxiliary antenna is one that is permanently installed and available for use when the main antenna is out of service for repairs or replacement. An auxiliary antenna may be located at the same transmitter site as the station's main antenna or at a separate site. In either case, however, the coverage area when operating with the auxiliary antenna may not extend beyond the coverage area of the main antenna. An application for an auxiliary antenna authorization filed under the procedures given in paragraph (b) or (c) of this section must contain a map showing the following contours for both the main and auxiliary antenna radiation:

(1) *AM stations:* The 0.5 mv/m field strength contours.

(2) *FM stations:* The 1.0 mv/m field strength contours.

(3) *TV stations:* The Grade B coverage contours.

(b) An application for a construction permit to install a new auxiliary antenna, or to make changes in an existing auxiliary antenna for which prior FCC authorization is required (see § 73.1690), must be filed on FCC Form 301 (FCC Form 340 for noncommercial educational stations).

(c) Authority to use a formerly licensed main antenna without changes or modifications as an auxiliary antenna may be obtained by filing FCC Form 302.

[43 FR 53741, Nov. 17, 1978, as amended at 44 FR 22740, Apr. 17, 1979; 45 FR 26066, Apr. 17, 1980; 50 FR 13974, Apr. 9, 1985; 51 FR 32088, Sept. 9, 1986]

§ 73.1680 Emergency antennas.

(a) An emergency antenna is one that is erected for temporary use after the authorized main and auxiliary antennas are damaged and cannot be used.

(b) Prior authority from the FCC is not required to erect and commence using an emergency antenna to restore program service to the public. However, an informal request to continue operation with the emergency antenna must be made to the FCC in Washington, DC within 24 hours after commencement of its use. The request is to include a description of the damage to the authorized antenna, a description of the emergency antenna, and the station operating power with the emergency antenna.

(1) *AM stations.* AM stations may use a horizontal or vertical wire or a nondirectional vertical element of a directional antenna as an emergency antenna. AM stations using an emergency nondirectional antenna or a horizontal or vertical wire pursuant to this section, in lieu or authorized directional facilities, shall operate with power reduced to 25% or less of the nominal licensed power, or, a higher power, not exceeding licensed power, while insur-

ing that the radiated filed strength does not exceed that authorized in any given azimuth for the corresponding hours of directional operation.

(2) *FM and TV stations.* FM and TV stations may erect any suitable radiator, or use operable sections of the authorized antenna(s) as an emergency antenna.

(c) The FCC may prescribe the output power, radiation limits, or other operating conditions when using an emergency antenna, and emergency antenna authorizations may be modified or terminated in the event harmful interference is caused to other stations or services by the use of an emergency antenna.

[43 FR 53741, Nov. 17, 1978, as amended at 44 FR 22740, Apr. 17, 1979; 50 FR 30948, July 31, 1985]

§ 73.1690 Modification of transmission systems.

The following procedures and restrictions apply to licensee modifications of authorized broadcast transmission system facilities.

(a) The following changes are prohibited:

(1) Those that would result in the emission of signals outside of the authorized channel exceeding limits prescribed for the class of service.

(2) Those that would cause the transmission system to exceed the equipment performance measurements prescribed for the class of service, (AM, § 73.44; FM, §§ 73.317, 73.319, and 73.322; TV, §§ 73.682 and 73.687).

(b) The following changes may be made only upon specific authority of the FCC. Applications requesting authorization must be filed on FCC Form 301 for commercial stations and on FCC Form 340 for noncommercial educational stations.

(1) Any change in the location, overall height of antenna structure, or directional radiation characteristics of a directional antenna system. (See § 73.45 and § 73.150, AM; § 73.316, FM; § 73.510, noncommercial educational FM; or § 73.685, TV.)

(2) Change in the operating power from that specified on the station authorization, except as provided in paragraph (c)(4) of this section.

(3) Change in location of the main studio to a location outside the station's principal community contour, except as provided for in § 73.1125.

(c) The following FM and TV station modifications may be made and operation commenced without prior authorization from the FCC, provided that the modifications would not possibly affect the operation of any co-located or nearby AM station. An application for license modification must be filed on FCC Form 302 within 10 days following completion of the changes. Equipment performance measurements are not required for applications covering changes described in paragraphs (c) (1) and (2) of this section.

(1) Replacement of a non-directional antenna with one of the same or different type or number of bays, provided that the height above ground of the center of radiation is within 2 meters of that specified in the station authorization, the parameters are within that permitted by its class designation, and there is no change in the maximum effective radiated power.

(2) Installation of a transmission line with one of a different type or length which requires change in the transmitter output power to maintain the licensed effective radiated power.

(3) Installation of harmonic filters, sideband filters or diplexers of a different type which requires a change in the transmitter output power to maintain the licensed effective radiated power.

(4) On or after December 1, 1989, increase in the effective radiated power of eligible Class A FM stations pursuant to MM Docket 88-375, when such increase is effected by:

(i) Replacement of a non-directional antenna with another non-directional antenna having higher gain, provided that the height above ground of the center of radiation is within ±2 meters of that specified in the station authorization; and/or

(ii) Increase in the power input to the antenna, as a result of adjustment of the transmitter output power, change in the type or length of the transmission line, and/or installation of filters or diplexers.

NOTE: Class A stations eligible for a power increase pursuant to paragraph (c)(4) are those which appear on a list issued by the Commission in November 1989.

(d) The following changes may be made without authorization from the FCC, however informal notification of the changes must be made according to the rule sections specified:

(1) Change in studio location within the principal community contour. See § 73.1125.

(2) Commencement of remote control operation pursuant to §§ 73.1400 and 73.1410.

(3) Modification of an AM directional antenna sampling system. See § 73.68.

(e) Any electrical and mechanical modification to authorized transmitting equipment that is not otherwise restricted by the preceding provisions of this section, may be made without FCC notification or authorization. Equipment performance measurements must be made within ten days after completing the modifications (See § 73.1590). An informal statement, diagram, etc., describing the modification must be retained at the transmitter site for as long as the equipment is in use.

[47 FR 8590, Mar. 1, 1982]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 73.1690, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 73.1695 Changes in transmission standards.

The FCC will consider the question whether a proposed change or modification of transmission standards adopted for broadcast stations would be in the public interest, convenience, and necessity, upon petition being filed by the person proposing such change or modification, setting forth the following:

(a) The exact character of the change or modification proposed;

(b) The effect of the proposed change or modification upon all other transmission standards that have been adopted by the FCC for broadcast stations;

(c) The experimentation and field tests that have been made to show that the proposed change or modification accomplishes an improvement and is technically feasible;

(d) The effect of the proposed change or modification in the adopted standards upon operation and obsolescence of receivers;

(1) Should a change of modification in the transmission standards be adopted by the FCC, the effective date thereof will be determined in the light of the considerations mentioned in this paragraph (d);

(e) The change in equipment required in existing broadcast stations for incorporating the proposed change or modification in the adopted standards; and

(f) The facts and reasons upon which the petitioner bases the conclusion that the proposed change or modification would be in the public interest, convenience, and necessity.

[49 FR 4211, Feb. 3, 1984]

§ 73.1700 Broadcast day.

The term "broadcast day" means that period of time between the station's sign-on and its sign-off.

[43 FR 45849, Oct 4, 1978]

§ 73.1705 Time of operation.

(a) Commercial and noncommercial educational TV and commercial FM stations will be licensed for unlimited time operation. Application may be made for voluntary share-time operation.

(b) Noncommercial educational FM stations will be licensed for unlimited and share time operation according to the provisions of § 73.561.

(c) AM stations will be licensed for unlimited time, limited time, daytime, share time or specified hours.

[43 FR 45849, Oct. 4, 1978]

§ 73.1710 Unlimited time.

Operation is permitted 24 hours a day.

[43 FR 45849, Oct. 4, 1978]

§ 73.1715 Share time.

Operation is permitted by two or more broadcast stations using the same channel in accordance with a division of hours mutually agreed upon and considered part of their licenses.

(a) If the licenses of stations authorized to share time do not specify hours of operation, the licensees shall endeavor to reach an agreement for a definite schedule of periods of time to be used by each. Such agreement shall be in writing and each licensee shall file it in duplicate original with each application to the FCC in Washington, DC for renewal of license. If and when such written agreements are properly filed in conformity with this Section, the file mark of the FCC will be affixed thereto, one copy will be retained by the FCC, and one copy returned to the licensee to be posted with the station license and considered as a part thereof. If the license specifies a proportionate time division, the agreement shall maintain this proportion. If no proportionate time division is specified in the license, the licensees shall agree upon a division of time. Such division of time shall not include simultaneous operation of the stations unless specifically authorized by the terms of the license.

(b) If the licensees of stations authorized to share time are unable to agree on a division of time, the FCC in Washington, DC shall be so notified by a statement filed with the applications for renewal of licenses. Upon receipt of such statement, the FCC will designate the applications for a hearing and, pending such hearing, the operating schedule previously adhered to shall remain in full force and effect.

(c) A departure from the regular schedule in a time-sharing agreement will be permitted only in cases where an agreement to that effect is put in writing, is signed by the licensees of the stations affected thereby and filed in triplicate by each licensee with the FCC in Washington, DC prior to the time of the time of the proposed change. If time is of the essence, the actual departure in operating schedule may precede the actual filing of written agreement, provided appropriate notice is sent to the FCC.

(d) If the license of an AM station authorized to share time does not specify the hours of operation, the station may be operated for the transmission of regular programs during the experimental period provided an agreement thereto is reached with the other stations with which the broadcast day is shared: *And further provided*, Such operation is not in conflict with § 73.72 (Operating during the experimental period). Time-sharing agreements for operation during the experimental period need not be submitted to the FCC.

(e) Noncommercial educational FM stations are authorized for share time operation according to the provisions of § 73.561.

[43 FR 45849, Oct. 4, 1978, as amended at 47 FR 40174, Sept. 13, 1982]

§ 73.1720 Daytime.

Operation is permitted during the hours between average monthly local sunrise and average monthly local sunset.

(a) The controlling times for each month of the year are stated in the station's instrument of authorization. Uniform sunrise and sunset times are specified for all of the days of each month, based upon the actual times of sunrise and sunset for the fifteenth day of the month adjusted to the nearest quarter hour. Sunrise and sunset times are derived by using the standardized procedure and the tables in the 1946 American Nautical Almanac issued by the United States Naval Observatory.

[43 FR 45849, Oct. 4, 1978]

§ 73.1725 Limited time.

(a) Operation is applicable only to class II (secondary) AM stations on a clear channel with facilities authorized before November 30, 1959. Operation of the secondary station is permitted during daytime and until local sunset if located west of the dominant station on the channel, or until local sunset at the dominant station if located east of that station. Operation is also permitted during nighttime hours not used by the dominant station or stations on the channel.

(b) No authorization will be granted for:

(1) A new limited time station;

(2) A limited time station operating on a changed frequency;

(3) A limited time station with a new transmitter site materially closer to the 0.1 mV/m contour of a co-channel U.S. class I station; or

(4) Modification of the operating facilities of a limited time station resulting in increased radiation toward any point on the 0.1mV/m contour of a co-channel U.S. class I station during the hours after local sunset in which the limited time station is permitted to operate by reason of location east of the class I station.

(c) The licensee of a secondary station which is authorized to operate limited time and which may resume operation at the time the dominant station (or stations) on the same channel ceases operation shall, with each application for renewal of license, file in triplicate a copy of its regular operating schedule. It shall bear a signed notation by the licensee of the dominant station of its objection or lack of objection thereto. Upon approval of such operating schedule, the FCC will affix its file mark and return one copy to the licensee authorized to operate limited time. This shall be posted with the station license and considered as a part thereof. Departure from said operating schedule will be permitted only pursuant to § 73.1715 (Share time).

[43 FR 45849, Oct. 4, 1978, as amended at 49 FR 17948, Apr. 26, 1984]

§ 73.1730 Specified hours.

(a) Specified hours stations must operate in accordance with the exact hours specified in their license. However, such stations, operating on local channels, unless sharing time with other stations, may operate at hours beyond those specified in their licenses to carry special events programing. When such programs are carried during nighttime hours, the station's authorized nighttime facilities must be used.

(b) Other exceptions to the adherence to the schedule of specified hours of operation are provided in § 73.72 (Operating during the experimental period), § 73.1250 (Broadcasting emergency information) and § 73.1740 (Minimum operating schedule).

[43 FR 45850, Oct. 4, 1978]

§ 73.1735 AM station operation pre-sunrise and post-sunset.

Certain classes of AM stations are eligible to operate pre-sunrise and/or post-sunset for specified periods with facilities other than those specified on their basic instruments of authorization. Such pre-sunrise and post-sunset operation is authorized pursuant to the provisions of § 73.99 of the Rules.

[49 FR 41249, Oct. 22, 1984]

§ 73.1740 Minimum operating schedule.

(a) All commercial broadcast stations are required to operate not less than the following minimum hours:

(1) *AM and FM stations.* Two-thirds of the total hours they are authorized to operate between 6 a.m. and 6 p.m. local time and two-thirds of the total hours they are authorized to operate between 6 p.m. and midnight, local time, each day of the week except Sunday.

(i) Daytime-only AM stations and former daytime-only AM stations that have been reclassified as Class II-S or III-S need comply only with the minimum requirements for operation between 6 a.m. and 6 p.m., local time.

(2) *TV stations.* (i) During the first 36 months of operation, not less than 2 hours daily in any 5 broadcast days per calendar week and not less than a total of:

(A) 12 hours per week during the first 18 months.

(B) 16 hours per week during the 19th through 24th months.

(C) 20 hours per week during the 25th through 30th months.

(D) 24 hours per week during the 31st through 36th months.

(ii) After 36 months of operation not less than 2 hours in each day of the week and not less than a total of 28 hours per calendar week.

(iii) Visual transmissions of test patterns, slides, or still pictures accompanied by unrelated aural transmissions may not be counted in computing program service (see § 73.653).

(3) "Operation" includes the period during which the station is operated pursuant to temporary authorization or program tests, as well as during the license period.

(4) In the event that causes beyond the control of a licensee make it impossible to adhere to the operating schedule of this section or to continue operating, the station may limit or discontinue operation for a period of not more than 30 days without further authority from the FCC. Notification must be sent to the FCC in Washington, D.C. not later than the 10th day of limited or discontinued operation. During such period, the licensee shall continue to adhere to the requirements in the station license pertaining to the lighting of antenna structures. In the event normal operation is restored prior to the expiration of the 30 day period, the licensee will so notify the FCC of this date. If the causes beyond the control of the licensee make it impossible to comply within the allowed period, informal written request shall be made to the FCC no later than the 30th day for such additional time as may be deemed necessary.

(b) Noncommercial educational AM and TV stations are not required to operate on a regular schedule and no minimum hours of operation are specified; but the hours of actual operation during a license period shall be taken into consideration in the renewal of noncommercial educational AM and TV broadcast licenses. Noncommercial educational FM stations are subject to the operating schedule requirements according to the provisions of § 73.561.

[43 FR 45850, Oct. 4, 1978, as amended at 53 FR 1032, Jan. 15, 1988]

§ 73.1745 Unauthorized operation.

(a) No broadcast station shall operate at times, or with modes or power, other than those specified and made a part of the license, unless otherwise provided in this part.

(b) Any unauthorized departure from an operating schedule which is required to be filed with the FCC in Washington, DC, will be considered as a violation of a material term of the license.

[43 FR 45850, Oct. 4, 1978]

§ 73.1750 Discontinuance of operation.

The licensee of each station shall notify the FCC in Washington, DC of permanent discontinuance of operation at least two days before operation is discontinued. Immediately after discontinuance of operation, the licensee shall forward the station license and other instruments of authorization to the FCC, Washington, DC for cancellation.

[47 FR 40175, Sept. 13, 1982]

§ 73.1800 General requirements related to the station log.

(a) The licensee of each station must maintain a station log as required by § 73.1820. This log shall be kept by station employees competent to do so, having actual knowledge of the facts required. All entries, whether required or not by the provisions of this part, must accurately reflect the station operation. Any employee making a log entry shall sign the log, thereby attesting to the fact that the entry, or any correction or addition made thereto, is an accurate representation of what transpired.

(b) The logs shall be kept in an orderly and legible manner, in suitable form and in such detail that the data required for the particular class of station concerned are readily available. Key letters or abbreviations may be used if the proper meaning or explanation is contained elsewhere in the log. Each sheet must be numbered and dated. Time entries must be made in local time and must be indicated as advanced (*e.g.*, EDT) or non-advanced (*e.g.*, EST) time.

(c) Any necessary corrections of a manually kept log after it has been signed in accordance with paragraph (a) of this section shall be made only by striking out the erroneous portion and making a corrective explanation on the log or attachment to it. Such corrections shall be dated and signed by the person who kept the log or the station chief operator, the station manager or an officer of the licensee.

(d) No automatically kept log shall be altered in any way after entries have been recorded. When automatic logging processes fail or malfunction, the log must be kept manually for that period and in accordance with the requirements of this section.

(e) No log, or portion thereof, shall be erased, obliterated or willfully destroyed during the period in which it is required to be retained. (Section 73.1840, Retention of logs.)

(f) Application forms for licenses and other authorizations may require that certain technical operating data be supplied. These application forms should be kept in mind in connection with the maintenance of the station log.

[43 FR 45850, Oct. 4, 1978, as amended at 48 FR 38481, Aug. 24, 1983; 48 FR 44806, Sept. 30, 1983; 49 FR 14509, Apr. 12, 1984; 49 FR 33663, Aug. 24, 1984; 50 FR 40016, Oct. 1, 1985]

§ 73.1820 Station log.

(a) Entries must be made in the station log either manually by a properly licensed operator in actual charge of the transmitting apparatus, or by automatic devices meeting the requirements of paragraph (b) of this section. Indications of operating parameters that are required to be logged must be logged prior to any adjustment of the equipment. Where adjustments are made to restore parameters to their proper operating values, the corrected indications must be logged and accompanied, if any parameter deviation was beyond a prescribed tolerance, by a notation describing the nature of the corrective action. Indications of all parameters whose values are affected by the modulation of the carrier must be read without modulation. The actual time of observation must be included in each log entry. The following information must be entered:

(1) *All stations:* (i) Entries required by § 17.49 of this chapter concerning any observed or otherwise known extinguishment or improper functioning of a tower light:

(A) The nature of such extinguishment or improper functioning.

(B) The date and time the extinguishment or improper operation was observed or otherwise noted.

(C) The date, time and nature of adjustments, repairs or replacements made.

(ii) Any entries not specifically required in this section, but required by the instrument of authorization or elsewhere in this part.

(iii) An entry of each test of the Emergency Broadcast System procedures pursuant to the requirement of subpart G of this part and the appropriate EBS checklist. All stations may keep EBS test data in a special EBS log which shall be maintained at any convenient location; however, such log should be considered a part of the station log.

(2) *Directional AM stations without an FCC-approved antenna sampling system* (See § 73.68): (i) An entry at the beginning of operations in each mode of operation, and thereafter at intervals not exceeding 3 hours, of the following (actual readings observed prior to making any adjustments to the equipment and an indication of any corrections to restore parameters to normal operating values):

(A) Common point current.

(B) When the operating power is determined by the indirect method, the efficiency factor F and either the product of the final amplifier input voltage and current or the calculated antenna input power. See § 73.51(e).

(C) Antenna monitor phase or phase deviation indications.

(D) Antenna monitor sample currents, current ratios, or ratio deviation indications.

(ii) Entries required by § 73.61 performed in accordance with the schedule specified therein.

(iii) Entries of the results of calibration of automatic logging devices (see paragraph (b) of this section), extension meters (see § 73.1550) or indicating instruments (see § 73.67) whenever performed.

(b) Automatic devices accurately calibrated and with appropriate time, date and circuit functions may be utilized to record entries in the station log *Provided:*

(1) The recording devices do not affect the operation of circuits or accuracy of indicating instruments of the equipment being recorded;

(2) The recording devices have an accuracy equivalent to the accuracy of the indicating instruments;

(3) The calibration is checked against the original indicators as often as necessary to ensure recording accuracy;

(4) Provision is made to actuate automatically an aural alarm circuit located near the operator on duty if any of the automatic log readings are not within the tolerances or other requirements specified in the rules or station license;

(5) The alarm circuit operates continuously or the devices which record each parameter in sequence must read each parameter at least once during each 30 minute period;

(6) The automatic logging equipment is located at the remote control point if the transmitter is remotely controlled, or at the transmitter location if the transmitter is manually controlled;

(7) The automatic logging equipment is located in the near vicinity of the operator on duty and is inspected periodically during the broadcast day. In the event of failure of malfunctioning of the automatic equipment, the employee responsible for the log shall make the required entries in the log manually at that time.

(8) The indicating equipment conforms to the requirements of § 73.1215 (Indicating instruments—specifications) except that the scales need not exceed 2 inches in length. Arbitrary scales may not be used.

(c) In preparing the station log, original data may be recorded in rough form and later transcribed into the log.

[43 FR 45854, Oct. 4, 1978, as amended at 44 FR 58735, Oct. 11, 1979; 47 FR 24580, June 7, 1982; 48 FR 38481, Aug. 24, 1983; 48 FR 44806, Sept. 30, 1983; 49 FR 33603, Aug. 23, 1984]

§ 73.1835 Special technical records.

The FCC may require a broadcast station licensee to keep operating and maintenance records as necessary to resolve conditions of actual or potential interference, rule violations, or deficient technical operation.

[48 FR 38482, Aug. 24, 1983]

§ 73.1840 Retention of logs.

(a) Any log required to be kept by station licensees shall be retained by them for a period of 2 years. However, logs involving communications incident to a disaster or which include communications incident to or involved in an investigation by the FCC and about which the licensee has been notified, shall be retained by the licensee until specifically authorized in writing by the FCC to destroy them. Logs incident to or involved in any claim or complaint of which the licensee has notice shall be retained by the licensee until such claim or complaint has been fully satisfied or until the same has been barred by statute limiting the time for filing of suits upon such claims.

(b) Logs may be retained on microfilm, microfiche or other data-storage systems subject to the following conditions:

(1) Suitable viewing—reading devices shall be available to permit FCC inspection of logs pursuant to § 73.1226, availability to FCC of station logs and records.

(2) Reproduction of logs, stored on data-storage systems, to full-size copies, is required of licensees if requested by the FCC or the public as authorized by FCC rules. Such reproductions must be completed within 2 full work days of the time of the request.

(3) Corrections to logs shall be made:

(i) Prior to converting to a data-storage system pursuant to the requirements of § 73.1800 (c) and (d), (§ 73.1800, General requirements relating to logs).

(ii) After converting to a data-storage system, by separately making such corrections and then associating with the related data-stored logs. Such corrections shall contain sufficient information to allow those reviewing the logs to identify where corrections have been made, and when and by whom the corrections were made.

(4) Copies of any log required to be filed with any application; or placed in the station's local public inspection file as part of an application; or filed with reports to the FCC must be reproduced in fullsize form when complying with these requirements.

[45 FR 41151, June 18, 1980, as amended at 46 FR 13907, Feb. 24, 1981; 46 FR 18557, Mar. 25, 1981; 49 FR 33663, Aug. 24, 1984]

§ 73.1860 Transmitter duty operators.

(a) Each AM, FM or TV broadcast station must have at least one person holding a commericial radio operator license or permit (any class unless otherwise otherswise endorsed) on duty in charge of the transmitter during all periods of broadcast operation. The operator must be on duty at the transmitter location, a remote control point, an ATS monitor and alarm point, or a position where extension meters are installed under the provisions of § 73.1550.

(b) The transmitter operator must be able to observe the required transmitter and monitor metering to determine deviations from normal indications. The operator must also be able to make the necessary adjustments from the normal operator duty position, except as provided for in § 73.1550.

(c) It is the responsibility of the station licensee to ensure that each transmitter operator is fully instructed and capable to perform all necessary observations and adjustments of the transmitting system and other associated operating duties to ensure compliance with the rules and station authorization.

(d) The transmitter duty operator may, at the discretion of the station licensee and chief operator, be employed for other duties or operation of other transmitting stations if such other duties will not interfere with the proper operation of the broadcast transmission system.

[46 FR 35463, July 8, 1981, as amended at 49 FR 50048, Dec. 26, 1984]

§ 73.1870 Chief operators.

(a) The licensee of each AM, FM, or TV broadcast station must designate a person holding a commercial radio operator license or permit (any class, unless endorsed) to serve as the station's chief operator. At times when the chief operator is unavailable or unable to act (e.g., vacations, sickness), the licensee shall designate another licensed operator as the acting chief operator on a temporary basis.

(b) Chief operators shall be employed or serve on the following basis:

(1) The chief operator for an AM station using a directional antenna or operating with greater than 10 kW authorized power, or of a TV station is to be an employee of the station on duty for whatever number of hours each week the station licensee determines is necessary to keep the station's technical operation in compliance with FCC rules and the terms of the station authorization.

(2) Chief operators for non-directional AM stations operating with authorized powers not exceeding 10 kW and FM stations may be either an employee of the station or engaged to serve on a contract basis for whatever number of hours each week the licensee determines is necessary to keep the station's technical operation in compliance with the FCC rules and terms of the station authorization.

(3) The designation of the chief operator must be in writing with a copy of the designation posted with the operator license. Agreements with chief operators serving on a contract basis must be in writing with a copy kept in the station files.

(c) The chief operator is responsibl for completion of the following dutie specified in this paragraph belo When these duties are delegated t other persons, the chief operator sha maintain supervisory oversight sufficient to know that each requiremen has been fulfilled in a timely and correct manner.

(1) Inspections and calibrations o the transmission system, require monitors, metering and control sy tems; and any necessary repairs or a justments where indicated. (Se § 73.1580.)

(2) Periodic AM field monitori point measurements, equipment pe formance measurements, or othe tests as specified in the rules or term of the station license.

(3) Review of the station records least once each week to determine required entries are being made co rectly. Additionally, verification mu be made that the station has been o erated as required by the rules or th station authorization. Upon compl tion of the review, the chief operato or his designee must date and sign th log, initiate any corrective actio

which may be necessary, and advise the station licensee of any condition which is repetitive.

(4) Any entries which may be required in the station records. (See § 73.1820.)

[46 FR 35463, July 8, 1981, as amended at 47 FR 31580, July 21, 1982; 48 FR 38482, Aug. 24, 1983; 48 FR 44806, Sept. 30, 1983; 49 FR 20670, May 16, 1984; 49 FR 50048, Dec. 26, 1984; 50 FR 32416, Aug. 12, 1985]

§ 73.1910 Fairness Doctrine.

The Fairness Doctrine is contained in section 315(a) of the Communications Act of 1934, as amended, which provides that broadcasters have certain obligations to afford reasonable opportunity for the discussion of conflicting views on issues of public importance. See FCC public notice "Fairness Doctrine and the Public Interest Standards," 39 FR 26372. Copies may be obtained from the FCC upon request.

[43 FR 45856, Oct. 4, 1978]

§ 73.1920 Personal attacks.

(a) When, during the presentation of views on a controversial issue of public importance, an attack is made upon the honesty, character, integrity or like personal qualities of an identified person or group, the licensee shall, within a reasonable time and in no event later than one week after the attack, transmit to the persons or group attacked:

(1) Notification of the date, time and identification of the broadcast;

(2) A script or tape (or an accurate summary if a script or tape is not available) of the attack; and

(3) An offer of a reasonable opportunity to respond over the licensee's facilities.

(b) The provisions of paragraph (a) of this section shall not apply to broadcast material which falls within one or more of the following categories:

(1) Personal attacks on foreign groups or foreign public figures;

(2) Personal attacks occurring during uses by legally qualified candidates.

(3) Personal attacks made during broadcasts not included in paragraph (b)(2) of this section and made by legally qualified candidates, their authorized spokespersons, or those associated with them in the campaign, on other such candidates, their authorized spokespersons or persons associated with the candidates in the campaign; and

(4) Bona fide newscasts, bona fide news interviews, and on-the-spot coverage of bona fide news events, including commentary or analysis contained in the foregoing programs.

(c) The provisions of paragraph (a) of this section shall be applicable to editorials of the licensee, except in the case of noncommercial educational stations since they are precluded from editorializing (section 399(a), Communications Act).

[43 FR 45856, Oct. 4, 1978, as amended at 44 FR 45956, Aug. 6, 1979]

§ 73.1930 Political editorials.

(a) Where a licensee, in an editorial,

(1) Endorses or,

(2) Opposes a legally qualified candidate or candidates, the licensee shall, with 24 hours after the editorial, transmit to, respectively,

(i) The other qualified candidate or candidates for the same office or,

(ii) The candidate opposed in the editorial,

(A) Notification of the date and the time of the editorial,

(B) A script or tape of the editorial and

(C) An offer of reasonable opportunity for the candidate or a spokesman of the candidate to respond over the licensee's facilities. Where such editorials are broadcast on the day of the election or within 72 hours prior to the day of the election, the licensee shall comply with the provisions of this paragraph sufficiently far in advance of the broadcast to enable the candidate or candidates to have a reasonable opportunity to prepare a response and to present it in a timely fashion.

(b) Inasmuch as noncommercial educational stations may not engage in editorializing nor may support nor oppose any candidate for political office (section 399, Communications Act), the provisions of paragraph (a) of this section, do not apply to such stations.

[43 FR 45856, Oct. 4, 1978, as amended at 47 FR 3791, Jan. 27, 1982; 51 FR 9965, Mar. 24, 1986]

§ 73.1940 Broadcasts by candidates for public office.

(a) *Definitions.* (1) A legally qualified candidate for public office is any person who:

(i) Has publicly announced his or her intention to run for nomination or office;

(ii) Is qualified under the applicable local, State or Federal law to hold the office for which he or she is a candidate; and

(iii) Has met the qualifications set forth in either paragraphs (a) (2), (3), or (4), of this section.

(2) A person seeking election to any public office including that of President or Vice President of the United States, or nomination for any public office except that of President or Vice President, by means of a primary, general or special election, shall be considered a legally qualified candidate if, in addition to meeting the criteria set forth in paragraph (a)(1) of this section, that person:

(i) Has qualified for a place on the ballot, or

(ii) Has publicly committed himself or herself to seeking election by the write-in method and is eligible under applicable law to be voted for by sticker, by writing in his or her name on the ballot or by other method, and makes a substantial showing that he or she is a bona fide candidate for nomination or office.

Person seeking election to the office of President or Vice President of the United States shall, for the purposes of the Communications Act and the rules thereunder, be considered legally qualified candidates only in those States or territories (or the District of Columbia) in which they have met the requirements set forth in paragraphs (a) (1) and (2) of this section: Except, that any such person who has met the requirements set forth in paragraphs (a) (1) and (2) in at least 10 States (or 9 and the District of Columbia) shall be considered a legally qualified candidate for election in all States, territories, and the District of Columbia for purposes of this Act.

(3) A person seeking nomination to any public office, except that of President or Vice President of the United States, by means of a convention, caucus or similar procedure, shall be considered a legally qualified candidate if, in addition to meeting the requirements set forth in paragraph (a)(1) of this section, that person makes a substantial showing that he or she is a bona fide candidate for such nomination: Except, that no person shall be considered a legally qualified candidate for nomination by the means set forth in this paragraph prior to 90 days before the beginning of the convention, caucus or similar procedure in which he or she seeks nomination.

(4) A person seeking nomination for the office of President or Vice President of the United States shall, for the purposes of the Communications Act and the rules thereunder, be considered a legally qualified candidate only in those States or territories (or the District of Columbia) in which, in addition to meeting the requirements set forth in paragraph (a)(1) of this section.

(i) He or she, or proposed delegates on his or her behalf, have qualified for the primary or Presidential preference ballot in that State, territory or the District of Columbia, or

(ii) He or she has made a substantial showing of bona fide candidacy for such nomination in that State, territory or the District of Columbia Except, that any such person meeting the requirements set forth in paragraphs (a) (1) and (4) of this section in at least 10 States (or nine and the District of Columbia) shall be considered a legally qualified candidate for nomination in all States, territories and the District of Columbia for purposes of this act.

(5) The term "substantial showing" of bona fide candidacy as used in paragraphs (a) (2), (3), and (4) of this section means evidence that the person claiming to be a candidate has engaged to a substantial degree in activities commonly associated with political campaigning. Such activities nor-

mally would include making campaign speeches, distributing campaign literature, issuing press releases, maintaining a campaign committee, and establishing campaign headquarters (even though the headquarters in some instances might be the residence of the candidate or his campaign manager). Not all of the listed activities are necessarily required in each case to demonstrate a substantial showing, and there may be activities not listed herein which would contribute to such a showing.

(b) *Charges for use of stations.* The charges, if any, made for the use of any broadcasting station by any person who is a legally qualified candidate for any public office in connection with his campaign for nomination for election, or election, to such office shall not exceed

(1) During the 45 days preceding the date of a primary or primary runoff election and during the 60 days preceding the date of a general or special election in which such person is a candidate, the lowest unit charge of the station for the same class and amount of time for the same period, and

(2) At any other time the charges made for comparable use of such station by other users thereof. The rates, if any, charged all such candidates for the same office shall be uniform and shall not be rebated by any means direct or indirect. A candidate shall be charged no more than the rate the station would charge if the candidate were a commercial advertiser whose advertising was directed to promoting its business within the same area as that encompassed by the particular office for which such person is a candidate. All discount privileges otherwise offered by a station to commercial advertisers shall be available upon equal terms to all candidates for public office.

(3) This paragraph shall not apply to any station which is not licensed for commercial operation.

(c) *Discrimination between candidates.* In making time available to candidates for public office, no licensee shall make any discrimination between candidates in practices, regulations, facilities, or services for or in connection with the service rendered pursuant to this part, or make or give any preference to any candidate for public office or subject any such candidate to any prejudice or disadvantage; nor shall any licensee make any contract or other agreement which shall have the effect of permitting any legally qualified candidate for any public office to broadcast to the exclusion of other legally qualified candidates for the same public office.

(d) *Records, inspection.* Every licensee shall keep and permit public inspection of a complete record (political file) of all requests for broadcast time made by or on behalf of candidates for public office, together with an appropriate notation showing the disposition made by the licensee of such requests, and the charges made, if any, if the request is granted. When free time is provided for use by or on behalf of such candidates, a record of the free time provided shall be placed in the political file. All records required by this paragraph shall be placed in the political file as soon as possible and shall be retained for a period of two years. See §§ 73.3526 and 73.3527.

(e) *Time of request.* A request for equal opportunities must be submitted to the licensee within 1 week of the day on which the first prior use, giving rise to the right of equal opportunities, occurred: *Provided, however,* That where the person was not a candidate at the time of such first prior use, he shall submit his request within 1 week of the first subsequent use after he has become a legally qualified candidate for the office in question.

(f) *Burden of proof.* A candidate requesting equal opportunities of the licensee, or complaining of noncompliance to the Commission shall have the burden of proving that he and his opponent are legally qualified candidates for the same public office.

(g) *General requirements.* (1) Except as otherwise indicated in paragraph (g)(2) of this section, no station licensee is required to permit the use of its facilities by any legally qualified candidate for public office, but if any licensee shall permit any such candidate to use its facilities, it shall afford equal opportunities to all other candidates for that office to use such facilities. Such licensee shall have no power of censorship over the material broadcast by any such candidate. Appearance by a legally qualified candidate on any: (i) Bona fide newscast; (ii) bona fide *news* interview; (iii) bona fide *news* documentary (if the appearance of the candidate is incidental to the presentation of the subject or subjects covered by the news documentary); or (iv) on-the-spot coverage of bona fide news events (including, but not limited to political conventions and activities incidental thereto) shall not be deemed to be use of a broadcasting station. (Section 315(a) of the Communications Act.)

(2) Section 312(a)(7) of the Communications Act provides that the Commission may revoke any station license or construction permit for willful or repeated failure to allow reasonable access to, or to permit purchase of, reasonable amounts of time for the use of a broadcasting station by a legally qualified candidate for Federal elective office on behalf of his candidacy.

(h) *Political broadcasting primer.* A detailed study of these rules regarding broadcasts by candidates for Federal and non-Federal public office is available in the FCC public notice of July 20, 1978, "The Law of Political Broadcasting and Cablecasting." Copies may be obtained from the FCC upon request.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[43 FR 32795, July 28, 1978, as amended at 43 FR 45856, Oct. 4, 1978; 43 FR 55769, Nov. 29, 1978; 45 FR 26066, Apr. 17, 1980; 45 FR 28141, Apr. 28, 1980]

§ 73.2080 Equal employment opportunities.

(a) *General EEO policy.* Equal opportunity in employment shall be afforded by all licensees or permittees of commercially or noncommercially operated AM, FM, TV, or international broadcast stations (as defined in this part) to all qualified persons, and no person shall be discriminated against in employment by such stations because of race, color, religion, national origin, or sex.

(b) *EEO program.* Each broadcast station shall establish, maintain, and carry out a positive continuing program of specific practices designed to ensure equal opportunity in every aspect of station employment policy and practice. Under the terms of its program, a station shall:

(1) Define the responsibility of each level of management to ensure a positive application and vigorous enforcement of its policy of equal opportunity, and establish a procedure to review and control managerial and supervisory performance;

(2) Inform its employees and recognized employee organizations of the positive equal employment opportunity policy and program and enlist their cooperation;

(3) Communicate its equal employment opportunity policy and program and its employment needs to sources of qualified applicants without regard to race, color, religion, national origin, or sex, and solicit their recruitment assistance on a continuing basis;

(4) Conduct a continuing program to exclude all unlawful forms of prejudice or discrimination based upon race, color, religion, national origin, or sex from its personnel policies and practices and working conditions; and

(5) Conduct a continuing review of job structure and employment practices and adopt positive recruitment, job design, and other measures needed to ensure genuine equality of opportunity to participate fully in all organizational units, occupations, and levels of responsibility.

(c) *EEO program requirements.* A broadcast station's equal employment opportunity program should reasonably address itself to the specific areas set forth below, to the extent possible, and to the extent that they are appropriate in terms of the station's size, location, etc.:

(1) Disseminate its equal opportunity program to job applicants and employees. For example, this requirement may be met by:

(i) Posting notices in the station's office and other places of employment, informing employees, and applicants for employment, of their equal employment opportunity rights. Where it is appropriate, such equal employment opportunity notices should be posted in languages other than English;

(ii) Placing a notice in bold type on the employment application informing prospective employees that discrimination because of race, color, religion, national origin, or sex is prohibited;

(iii) Seeking the cooperation of labor unions, if represented at the station, in the implementation of its EEO program and the inclusion of non-discrimination provisions in union contracts;

(iv) Utilizing media for recruitment purposes in a manner that will contain no indication, either explicit or implicit, of a preference for one sex over another and that can be reasonably expected to reach minorities and women.

(2) Use minority organizations, organizations for women, media, educational institutions, and other potential sources of minority and female applicants, to supply referrals whenever job vacancies are available in its operation. For example, this requirement may be met by:

(i) Placing employment advertisements in media that have significant circulation among minorities residing and/or working in the recruiting area;

(ii) Recruiting through schools and colleges, including those located in the station's local area, with significant minority-group enrollments;

(iii) Contacting, both orally and in writing, minority and human relations organizations, leaders, and spokesmen and spokeswomen to encourage referral of qualified minority or female applicants;

(iv) Encouraging current employees to refer minority or female applicants;

(v) Making known to recruitment sources in the employer's immediate area that qualified minority members and females are being sought for consideration whenever you hire and that all candidates will be considered on a nondiscriminatory basis.

(3) Evaluate its employment profile and job turnover against the availability of minorities and women in its recruitment area. For example, this requirement may be met by:

(i) Comparing the composition of the relevant labor area with composition of the station's workforce;

(ii) Where there is underrepresentation of either minorities and/or women, examining the company's personnel policies and practices to assure that they do not inadvertently screen out any group and take appropriate action where necessary. Data on representation of minorities and women in the available labor force are generally available on a metropolitan statistical area (MSA) or county basis.

(4) Undertake to offer promotions of qualified minorities and women in a nondiscriminatory fashion to positions of greater responsibility. For example, this requirement may be met by:

(i) Instructing those who make decisions on placement and promotion that qualified minority employees and females are to be considered without discrimination, and that job areas in which there is little or no minority or female representation should be reviewed;

(ii) Giving qualified minority and female employees equal opportunity for positions which lead to higher positions. Inquiring as to the interest and skills of all lower paid employees with respect to any of the higher paid positions.

(5) Analyze its efforts to recruit, hire, and promote minorities and women and address any difficulties encountered in implementing its equal employment opportunity program. For example, this requirement may be met by:

(i) Avoiding use of selection techniques or tests that have the effect of discriminating against qualified minority groups or females;

(ii) Reviewing seniority practices to ensure that such practices are nondiscriminatory;

(iii) Examining rates of pay and fringe benefits for employees having the same duties, and eliminating any inequities based upon race or sex discrimination.

[52 FR 26684, July 16, 1987]

§ 73.3500 Application and report forms.

Following are the FCC broadcast application and report forms, listed by number.

Form number	Title
301	Application for Authority to Construct or Make Changes in a Commercial Broadcast Station.
301-A	Application for Authority to Operate a Broadcast Station by Remote Control or to Make Changes in a Remote Control Authorization.
302	Application for New Broadcast Station License.
303-S	Application for Renewal of License for Commercial and Noncommercial Educational AM, FM and TV Broadcast Stations.
307	Application for Extension of Broadcast Construction Permit or to Replace Expired Construction Permit.
308	Application for Permit to Deliver Programs to Foreign Broadcast Stations.
309	Application for Authority to Construct or Make Changes in an International or Experimental Broadcast Station.
310	Application for an International or Experimental Broadcast Station License.
311	Application for Renewal of an International or Experimental Broadcast Station License.
313	Application for Authorization in the Auxiliary Broadcast Services.
313-R	Application for Renewal of Auxiliary Broadcast License (Short Form).
314	Application for Consent to Assignment of Broadcast Station Construction Permit or License.
315	Application for Consent to Transfer of Control of Corporation Holding Broadcast Station Construction Permit or License.
316	Application for Consent to Assignment of Broadcast Station Construction Permit or License or Transfer of Control of Corporation Holding Broadcast Station Construction Permit or License.
323	Ownership Report.
323-E	Ownership Report for Noncommercial Educational Broadcast Station.
330	Application for authorization to construct new or make changes in Instructional TV Fixed and/or Response Stations, or to assign or transfer such stations.
330-L	Application for Instructional Television Fixed Station License.
330-R	Application for Renewal of Instructional TV Fixed Station and/or Response Station(s) and Low Power Relay Station(s) License.
340	Application for Authority to Construct or Make Changes in a Noncommercial Educational Broadcast Station.
345	Application for Consent to Assignment of a TV or FM Translator Station Construction Permit or License.
346	Application for Authority to Construct or Make Changes in a Low Power TV, TV Translator or TV Booster Station.
347	Application for a Low Power TV, TV Translator or TV Booster Station License.
348	Application for Renewal of a Low Power TV, TV Translator, or FM Translator Station License.
349	Application for Authority to Construct or Make Changes in an FM Translator or FM Booster Station.
350	Application for an FM Translator or FM Booster Station License.
395-B	Annual Employment Report and instructions.
396	Broadcast Equal Employment Opportunity Program Report.
396-A	Broadcast Equal Employment Opportunity Model Program Report.

[44 FR 38486, July 2, 1979]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 73.3500, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 73.3511 Applications required.

(a) "Formal application" means any request for authorization where an FCC form for such request is prescribed. The prescription of an FCC form includes the requirement that the proper edition of the form is used. Formal applications on obsolete forms are subject to the provisions of § 73.3564 concerning acceptance of applications and § 73.3566 concerning defective applications.

(b) "Informal application" means all other written requests for authorization. All such applications should contain a caption clearly indicating the nature of the request submitted therein.

(c) Formal and informal applications must comply with the requirements as to signing specified herein and in § 73.3513.

[44 FR 38486, July 2, 1979, as amended at 47 FR 40172, Sept. 13, 1982]

§ 73.3512 Where to file; number of copies.

All applications for authorizations required by § 73.3511 shall be filed at the FCC in Washington, DC (Applications requiring fees as set forth at Part 1, Subpart G of this chapter must be filed in accordance with § 0.401(b) of the rules.) The number of copies required for each application is set forth in the FCC Form which is to be used in filing such application.

[52 FR 10231, Mar. 31, 1987]

§ 73.3513 Signing of applications.

(a) Applications, amendments thereto, and related statements of fact required by the FCC must be signed by the following persons:

(1) *Individual Applicant.* The applicant, if the applicant is an individual.

(2) *Partnership.* One of the partners, if the applicant is a partnership.

(3) *Corporation.* An officer, if the applicant is a corporation.

(4) *Unincorporated Association.* A member who is an officer, if the applicant is an unincorporated association.

(5) *Governmental Entity.* Such duly elected or appointed officials as may be competent to do so under the law of the applicable jurisdiction, if the applicant is an eligible governmental entity, such as a State or Territory of the United States and political subdivisions thereof, the District of Columbia, and a unit of local government, including an unincorporated municipality.

(b) Applications, amendments thereto, and related statements of fact required by the FCC may be signed by the applicant's attorney in case of the applicant's physical disability or of his absence from the United States. The attorney shall in that event separately set forth the reason why the application is not signed by the applicant. In addition, if any matter is stated on the basis of the attorney's belief only (rather than his knowledge), he shall separately set forth his reasons for believing that such statements are true.

(c) Only the original of applications, amendments, or related statements of fact, need be signed; copies may be conformed.

(d) Applications, amendments, and related statements of fact need not be submitted under oath. Willful false statements made therein however, will be considered a violation of § 73.1015, are also punishable by fine and imprisonment, U.S. Code, Title 18, section 1001, and by appropriate adminstrative sanctions including revocation of station license pursuant to section 312(a)(1) of the Communications Act.

[44 FR 38487, July 2, 1979, as amended at 51 FR 3069, Jan. 23, 1986]

§ 73.3514 Content of applications.

(a) Each application shall include all information called for by the particular form on which the application is required to be filed, unless the information called for is inapplicable, in which case this fact shall be indicated.

(b) The FCC may require an applicant to submit such documents and written statements of fact as in its judgment may be necessary. The FCC may also, upon its own motion or upon motion of any party to a proceeding, order the applicant to amend the application so as to make it more definite and certain.

[44 FR 38487, July 2, 1979]

§ 73.3516 Specification of facilities.

(a) An application for facilities in the AM, FM, or TV broadcast services or low power TV service shall be limited to one frequency, or channel, and no application will be accepted for filing if it requests an alternate frequency or channel.

(b) An application for facilities in the experimental and auxiliary broadcast services may request the assignment of more than one frequency if consistent with applicable rules in Part 74. Such applications must specify the frequency or frequencies requested and may not request alternate frequencies.

(c) An application for a construction permit for a new broadcast station, the facilities for which are specified in an outstanding construction permit or license, will not be accepted for filing.

(d) An application for facilities in the International broadcast service may be filed without a request for specific frequency, as the FCC will assign frequencies from time to time in accordance with §§ 73.702 and 73.711.

(e) An application for a construction permit for a new broadcast station or for modification of construction permit or license of a previously authorized broadcast station will not be accepted for filing if it is mutually exclusive with an application for renewal of license of an existing broadcast station unless it is tendered for filing by the end of the first day of the last full calendar month of the expiring license term.

(1) If the license renewal application is not timely filed as prescribed in § 73.3539, the deadline for filing applications mutually exclusive therewith is the 90th day after the FCC gives public notice that it has accepted the late-filed renewal application for filing.

(2) If any deadline falls on a nonbusiness day, the cutoff shall be the close of business of the first full business day thereafter.

(3) The dates when the licenses of all broadcast and broadcast auxiliary services regularly expire are listed in §§ 73.733, 73.1020 and 74.15.

[44 FR 38487, July 2, 1979, as amended at 47 FR 21494, May 18, 1982; 49 FR 47843, Dec. 7, 1984; 51 FR 44071, Dec. 8, 1986]

§ 73.3517 Contingent applications.

Contingent applications for new stations and for changes in facilities of existing stations are not acceptable for filing. Contingent applications will be accepted for filing under circumstances described below:

(a) Upon filing of an application for the assignment of a license or construction permit, or for a transfer of control of a licensee or permittee, the proposed assignee or transferee may, upon payment of the processing fee prescribed in Subpart G, Part 1 of this chapter, file applications in its own name for authorization to make changes in the facilities to be assigned or transferred contingent upon approval and consummation of the assignment or transfer. Any application filed pursuant to this paragraph must be accompanied by a written statement from the existing licensee which specifically grants permission to the assignee or permittee to file such application. The processing fee will not be refundable should the assignment or transfer not be approved. The existing licensee or permittee may also file a contingent application in its own name, but fees in such cases also not refundable.

(b) Whenever the FCC determines that processing of any application filed pursuant to paragraph (a) of this section, would be contrary to sound administrative practice or would impose an unwarranted burden on its staff and resources, the FCC may defer processing of such application until the assignment or transfer has been granted and consummated.

[44 FR 38487, July 2, 1979, as amended at 45 FR 41152, June 18, 1980; 52 FR 5294, Feb. 20, 1987; 53 FR 36787, Sept. 22, 1988]

§ 73.3518 Inconsistent or conflicting applications.

While an application is pending and undecided, no subsequent inconsistent or conflicting application may be filed by or on behalf of or for the benefit of the same applicant, successor or assignee.

[44 FR 38487, July 2, 1979]

§ 73.3519 Repetitious applications.

(a) Where the FCC has denied an application for a new station or for any modification of services or facilities, or dismissed such application with prejudice, no like application involving service of the same kind for substantially the same area by substantially the same applicant, or his successor or assignee, or on behalf or for the benefit of the original parties in interest, may be filed within 12 months from the effective date of the FCC's action. However, applicants whose applications have been denied in a comparative hearing may apply immediately for another available facility.

(b) Where an appeal has been taken from the action of the FCC in denying a particular application, another application for the same class of broadcast station and for the same area, in whole or in part, filed by the same applicant, or his successor or assignee, or on behalf of, or for the benefit of the original parties in interest, will not be considered until final disposition of such appeal.

[44 FR 38488, July 2, 1979]

§ 73.3520 Multiple applications.

Where there is one application for new or additional facilities pending, no other application for new or additional facilities for a station of the same class to serve the same community may be filed by the same applicant, or successor or assignee, or on behalf of, or for the benefit of the original parties in interest. Multiple applications may not be filed simultaneously.

[44 FR 38488, July 2, 1979]

§ 73.3521 Mutually exclusive applications for low power television, television translators and television booster stations.

When there is a pending application for a new low power television, television translator, or television booster station, or for major changes in an existing station, no other application which would be directly mutually exclusive with the pending application may be filed by the same applicant or by any applicant in which any individual in common with the pending application has any interest, direct or indirect, except that interests or less than 1% will not be considered.

[52 FR 31400, Aug. 20, 1987]

§ 73.3522 Amendment of applications.

(a) *Predesignation amendment.* (1) Subject to the provisions of §§ 73.3525, 73.3571, 73.3572, 73.3573, and 73.3580, and except as provided in paragraph (a)(2) of this section, any application, other than an application for a low power TV, TV translator, TV booster or a nonreserved band FM station may be amended as a matter of right prior to the adoption date of an order designating such applications for hearings, merely by filing the appropriate number of copies of the amendments in question duly executed in accordance with § 73.3513. If a petition to deny (or to designate for hearing) has been filed, the amendment shall be served on the petitioner.

(2) Subject to the provisions of §§ 73.3525, 73.3571, 73.3572, 73.3573 and 73.3580, and except for applications for low power TV, TV translator, TV booster or non-reserved band FM stations, mutually exclusive broadcast applications may be amended as a matter of right by the date specified (not less than 30 days after issuance) in the FCC's Public Notice announcing the acceptance for filing of the last-filed mutually exclusive application. Subsequent amendments prior to designation of the proceeding for hearing will be considered only upon a showing of good cause for late filing or pursuant to § 1.65 or § 73.3514. Unauthorized or untimely amendments are subject to return by the FCC's staff without consideration.

(3) Subject to the provisions of §§ 73.3525, 73.3572, and 73.3580, and except as provided in paragraph (a)(4) of this section, any application for a low power TV, TV translator or TV booster station may be amended at any time.

(4) No applicant for a low power TV, TV translator or TV booster station which is mutually exclusive can improve its status with respect to § 1.1622 by amendment of its application subsequent to the release of the initial Public Notice announcing the public lottery that will resolve the applicant's mutual exclusivity pursuant to § 1.1601 *et seq.*, not withstanding the requirements of § 1.65.

(5) Paragraphs (b) and (c) of this section are not applicable to applications for low power TV, TV translator, or TV booster stations.

(6) Subject to the provisions of §§ 73.3525, 73.3573, and 73.3580, applications for non-reserved band FM stations (other than Class D stations) may be amended as a matter of right during the appropriate window filing period pursuant to § 73.3564(d). For a period of 30 days following the FCC's issuance of a Public Notice announcing the acceptance of the application for tender, minor amendments may be filed as a matter of right; provided, however, that such amendments may not correct deficiencies in the tenderability of the underlying application. Subsequent amendments prior to designation for hearing or grant will be considered only upon a showing of good cause for late filing or pursuant to § 1.65 or § 73.3514. Unauthorized or untimely amendments are subject to return by the Commission without consideration. However, an amendment to a non-reserved band application will not be accepted after the close of the appropriate filing window if the effect of such amendment is to alter the proposed facility's coverage area so as to produce a conflict with an applicant who files subsequent to the initial applicant but prior to the amendment application. Similarly, an applicant subject to "first come/first serve" processing will not be permitted to amend its application and retain filing priority if the result of such amendment is to alter the facility's coverage area so as to produce a conflict with an applicant who files subsequent to the initial applicant but prior to the amendment.

(b) *Postdesignation amendment.* (1) Except as provided in paragraph (b)(2) of this section, requests to amend an application after it has been designated for hearing will be considered only upon written petition properly served upon the parties of record in accordance with § 1.47 and, where applicable, compliance with the provisions of § 73.3525, and will be considered only upon a showing of good cause for late filing. In the case of requests to amend the engineering proposal (other than to make changes with respect to the type of equipment specified), good cause will be considered to have been shown only if, in addition to the usual good cause consideration, it is demonstrated:

(i) That the amendment is necessitated by events which the applicant could not reasonably have foreseen (e.g., notification of a new foreign station or loss of transmitter site by condemnation); and

(ii) That the amendment does not require an enlargement of issues or the addition of new parties to the proceeding.

(2) In comparative broadcast cases (including comparative renewal proceedings), amendments relating to issues first raised in the designation order may be filed as a matter of right within 30 days after that Order or a summary thereof is published in the Federal Register, or by a date certain to be specified in the Order.

(c) Notwithstanding the provisions of paragraph (b) of this section, and subject to compliance with the provisions of § 73.3525, a petition for leave to amend may be granted, provided it is requested that the application as amended be removed from the hearing docket and returned to the processing line. See § 73.3571.

Note 1: When two or more broadcast applications are tendered for filing which are mutually exclusive with each other but not in conflict with any previously filed applications which have been accepted for filing, the FCC, where appropriate, will announce acceptance of the earliest tendered application and place the later filed application or applications on a subsequent public notice of acceptance for filing in order to establish a deadline for the filing of amendments as a matter of right for all applicants in the group.

[44 FR 38488, July 2, 1979, as amended at 44 FR 40311, July 10, 1979; 51 FR 19347, May 29, 1986; 52 FR 31400, Aug. 20, 1987; 53 FR 26074, July 11, 1988]

§ 73.3523 Dismissal of applications in renewal proceedings.

(a) Any applicant for a construction permit, that has filed an application that is mutually exclusive with an application for the renewal of a license of an AM, FM or television station (hereinafter "competing applicant"), and seeks to dismiss or withdraw its application and thereby remove a conflict between applications pending before the Commission, must obtain the approval of the Commission.

(b) If a competing applicant seeks to dismiss or withdraw its application prior to the Initial Decision stage of the hearing on its application, it must submit to the Commission a request for approval of the dismissal or withdrawal of its application, a copy of any written agreement related to the dismissal or withdrawal of its application, and an affidavit setting forth:

(1) A certification that neither the applicant nor its principals has received or will receive any money or other consideration in exchange for dismissing or withdrawing its application;

(2) A statement that its application was not filed for the purpose of reaching or carrying out an agreement with any other applicant regarding the dismissal or withdrawal of its application; and

(3) The terms of any oral agreement relating to the dismissal or withdrawal of its application.

In addition, within 5 days of the applicant's request for approval, each remaining competing applicant and the renewal applicant must submit an affidavit setting forth:

(4) A certification that neither the applicant nor its principals has paid or will pay any money or other consideration in exchange for the dismissal or withdrawal of the application; and

(5) The terms of any oral agreement relating to the dismissal or withdrawal of the application.

(c) If a competing applicant seeks to dismiss or withdraw its application after the Initial Decision stage of the hearing on its application, it must submit to the Commission a request for approval of the dismissal or withdrawal of its application, a copy of the any written agreement related to the dismissal or withdrawal, and an affidavit setting forth:

(1) A certification that neither the applicant nor its principals has re-

ceived or will receive any money or other consideration in excess of the legitimate and prudent expenses of the applicant;

(2) The exact nature and amount of any consideration paid or promised;

(3) An itemized accounting of the expenses for which it seeks reimbursement;

(4) A statement that its application was not filed for the purpose of reaching or carrying out an agreement with any other applicant regarding the dismissal or withdrawal of its application; and

(5) The terms of any oral agreement relating to the dismissal or withdrawal of its application.

In addition, within 5 days of the applicant's request for approval, each remaining party to any written or oral agreement must submit an affidavit setting forth:

(6) A certification that neither the applicant nor its principals has paid or will pay money or other consideration in excess of the legitimate and prudent expenses of the withdrawing applicant in exchange for the dismissal or withdrawal of the application; and

(7) The terms of any oral agreement relating the dismissal or withdrawal of the application.

(d) For the purpose of this section:

(1) Affidavits filed pursuant to this section shall be executed by the applicant, permittee or licensee, if an individual; a partner having personal knowledge of the facts, if a partnership; or an officer having personal knowledge of the facts, if a corporation or association.

(2) An application shall be deemed to be pending before the Commission from the time an application is filed with Commission until an order of the Commission granting or denying the application is no longer subject to reconsideration by the Commission or to review by any court.

(3) "Legitimate and prudent expenses" are those expenses reasonably incurred by an applicant in preparing, filing, and prosecuting its application.

(4) "Other consideration" consists of financial concessions, including but not limited to the transfer of assets or the provision of tangible pecuniary benefit, as well as nonfinancial concessions that confer any type of benefit on the recipient.

[54 FR 22598, May 25, 1989]

EFFECTIVE DATE NOTE: At 55 FR 28914, July 16, 1990, § 73.3524 was redesignated as § 73.3588 and the title and paragraphs (a) introductory text and (b) introductory text were revised effective October 4, 1990. For the convenience of the user, the superseded text of § 73.3524 appears as follows:

§ 73.3524 Dismissal of petitions to deny in renewal proceedings.

(a) Whenever a petition to deny has been filed against any application for the renewal of a license for an AM, FM, or television station, or against a construction permit application that is mutually exclusive with a renewal application, and the petitioner seeks to dismiss or withdraw the petition to deny, either unilaterally or in exchange for financial consideration, the petitioner must file with the Commission a request for approval of the dismissal or withdrawal, a copy of any written agreement related to the dismissal or withdrawal, and an affidavit setting forth:

(1) A certification that neither the petitioner nor its principals has received or will receive any money or other consideration in excess of legitimate and prudent expenses in exchange for the dismissal or withdrawal of the petition to deny;

(2) The exact nature and amount of any consideration received or promised;

(3) An itemized accounting of the expenses for which it seeks reimbursement; and

(4) The terms of any oral agreement related to the dismissal or withdrawal of the petition to deny.

In addition, within 5 days of petitioner's request for approval, each remaining party to any written or oral agreement must submit an affidavit setting forth:

(5) A certification that neither the applicant nor its principals had paid or will pay money or other consideration in excess of the legitimate and prudent expenses of the petitioner in exchange for dismissing or withdrawing the petition to deny; and

(6) The terms of any oral agreement relating to the dismissal or withdrawal of the petition to deny.

(b) *Citizens' agreements.* Whenever a petition to deny has been filed against any application for the renewal of a license for an AM, FM, or television station, or against a construction permit application that is mutually exclusive with a renewal application, and the petitioner seeks to dismiss or withdraw the petition to deny in exchange for non-financial consideration (*e.g.*, programming, ascertainment or employment initiatives), this is referred to as a citizens' agreement. The parties to the agreement must file with the Commission a joint request for approval of the citizens' agreement, a copy of any written agreement, and an affidavit executed by each party setting forth:

(1) Certification that neither the petitioner, nor any person or organization related to the petitioner, has received or will receive any money or other consideration in connection with the citizens' agreement other than legitimate and prudent expenses incurred in prosecuting the petition to deny;

(2) Certification that neither the petitioner, nor any person or organization related to petitioner is or will be involved in carrying out, for a fee, any programming, ascertainment, employment or other non-financial initiative referred to in the citizens' agreement; and

(3) The terms of any oral agreement.

(c) For the purposes of this section:

(1) Affidavits filed pursuant to this section shall be executed by the applicant, permittee or licensee, if an individual; a partner having personal knowledge of the facts, if a partnership; or an officer having personal knowledge of the facts, if a corporation or association.

(2) A petition shall be deemed to be pending before the Commission from the time a petition is filed with the Commission until an order of the Commission granting or denying the petition is no longer subject to reconsideration by the Commission or to review by any court.

(3) "Legitimate and prudent expenses" are those expenses reasonably incurred by a petitioner in preparing, filing, and prosecuting its petition for which reimbursement is being sought.

(4) "Other consideration" consists of financial concessions, including but not limited to the transfer of assets or the provision of tangible pecuniary benefit, as well as non-financial concessions that confer any type of benefit on the recipient.

[54 FR 22598, May 25, 1989]

§ 73.3525 Agreements for removing application conflicts.

(a) Except as provided in § 73.3523 regarding dismissal of applications in comparative renewal proceedings, whenever applicants for a construction permit for a broadcast station enter into an agreement to procure the removal of a conflict between applications pending before the FCC by withdrawal or amendment of an application or by its dismissal pursuant to § 73.3568, all parties thereto shall, within 5 days after entering into the agreement, file with the FCC a joint request for approval of such agreement. The joint request shall be accompanied by a copy of the agreement and an affidavit of each party to the agreement setting forth:

(1) The reasons why it is considered that such agreement is in the public interest; and

(2) A statement that its application was not filed for the purpose of reaching or carrying out such agreement.

(b) Whenever two or more conflicting applications for construction permits for broadcast stations pending before the FCC involve a determination of fair, efficient and equitable distribution of service pursuant to section 307(b) of the Communications Act, and an agreement is made to procure the withdrawal (by amendment to specify a different community or by dismissal pursuant to § 73.3568) of the only application or applications seeking the same facilities for one of the communities involved, all parties thereto shall file the joint request and affidavits specified in paragraph (a) of this section.

(1) If upon examination of the proposed agreement the FCC finds that withdrawal of one of the applications would unduly impede achievement of a fair, efficient and equitable distribution of radio service among the several States and communities, then the FCC shall order that further opportunity be afforded for other persons to apply for the facilities specified in the application or applications to be withdrawn before acting upon the pending request for approval of the agreement.

(2) Upon release of such order, any party proposing to withdraw its application shall cause to be published a notice of such proposed withdrawal at least twice a week for 2 consecutive weeks within the 3-week period immediately following release of the FCC's order, in a daily newspaper of general circulation published in the community in which it was proposed to locate the station. However, if there is no such daily newspaper published in the community, the notice shall be published as follows:

(i) If one or more weekly newspapers of general circulation are published in the community in which the station was proposed to be located, notice shall be published in such a weekly newspaper once a week for 3 consecutive weeks within the 4-week period immediately following the release of the FCC's order.

(ii) If no weekly newspaper of general circulation is published in the community in which the station was proposed to be located, notice shall be published at least twice a week for 2 consecutive weeks within the 3-week period immediately following the release of the FCC's order in the daily newspaper having the greatest general circulation in the community in which the station was proposed to be located.

(3) The notice shall state the name of the applicant; the location, frequency and power of the facilities proposed in the application; the location of the station or stations proposed in the applications with which it is in conflict; the fact that the applicant proposes to withdraw the application; and the date upon which the last day of publication shall take place.

(4) Such notice shall additionally include a statement that new applications for a broadcast station on the same frequency, in the same community, with substantially the same engineering characteristics and proposing to serve substantially the same service area as the application sought to be withdrawn, timely filed pursuant to the FCC's rules, or filed, in any event, within 30 days from the last date of publication of the notice (notwithstanding any provisions normally requiring earlier filing of a competing application), will be entitled to comparative consideration with other pending mutually exclusive affidavits.

(5) Within 7 days of the last day of publication of the notice, the applicant proposing to withdraw shall file a statement in triplicate with the FCC giving the dates on which the notice was published, the text of the notice and the name and location of the newspaper in which the notice was published.

(6) Where the FCC orders that further opportunity be afforded for other persons to apply for the facilities sought to be withdrawn, no application of any party to the agreement will be acted upon by the FCC less than 30 days from the last day of publication of the notice specified in paragraph (b)(2) of this section. Any applications for a broadcast station on the same frequency in the same community, with substantially the same engineering characteristics and proposing to serve substantially the same service area as the application sought to be withdrawn, filed within the 30-day period following the last date of publication of the notice (notwithstanding any provisions normally requiring earlier filing of a competing application), or otherwise timely filed, will be entitled to comparative consideration with other pending mutually exclusive applications. If the application of any party to which the new application may be in conflict has been designated for hearing, any such new application will be entitled to consolidation in the proceeding.

(c) Except where a joint request is filed pursuant to paragraph (a) of this section, any applicant filing an amendment pursuant to § 73.3522(a) or a request for dismissal pursuant to § 73.3568(a) which would remove a conflict with another pending application; or a petition for leave to amend pursuant to § 73.3522 (b) or (c) which would permit a grant of the amended application or an application previously in conflict with the amended application; or a request for dismissal pursuant to § 73.3568(c), shall file with it an affidavit as to whether or not consideration (including an agreement for merger of interests) has been promised to or received by such applicant, directly or indirectly, in connection with the amendment, petition or request.

(d) Upon the filing of a petition for leave to amend or to dismiss an application for broadcast facilities which has been designated for hearing or upon the dismissal of such application on the FCC's own motion pursuant to § 73.3568(b), each applicant or party remaining in hearing, as to whom a conflict would be removed by the amendment or dismissal shall submit for inclusion in the record of that proceeding an affidavit stating whether or not he has directly or indirectly paid or promised consideration (including an agreement for merger of interests) in connection with the removal of such conflict.

(e) Where an affidavit filed pursuant to paragraph (c) of this section states that consideration has been paid or promised, the affidavit shall set forth in full all relevant facts, including, but not limited to, the material listed in paragraph (a) of this section for inclusion in affidavits.

(f) Affidavits filed pursuant to this section shall be executed by the applicant, permittee or licensee, if an individual; a partner having personal knowledge of the facts, if a partnership; or an officer having personal knowledge of the facts, if a corporation or association.

(g) Requests and affidavits which relate to an application which has not been designated for hearing shall bear the file number of such application. If the affiant is also an applicant, the affidavit shall also bear the file number of affiant's pending application(s). Requests and affidavits which relate to an application which is designated for hearing shall bear the file number of that application and the hearing docket number and will be acted on by the presiding officer.

(h) For the purposes of this section an application shall be deemed to be "pending" before the FCC and a party shall be considered to have the status of an "applicant" from the time an application is filed with the FCC until an order of the FCC granting or denying it is no longer subject to reconsideration by the FCC or to review by any court.

[44 FR 38488, July 2, 1979, as amended at 48 FR 17591, Apr. 25, 1983; 51 FR 9965, Mar. 24, 1986; 54 FR 22599, May 25, 1989]

§ 73.3526 Local public inspection file of commercial stations.

(a) *Records to be maintained.* Every applicant for a construction permit for a new station in the commercial broadcast services shall maintain for public inspection a file containing the material described in paragraph (a)(1) of this section. Every permittee or licensee of an AM, FM or TV station in the commercial broacast services shall maintain for public inspection a file containing the material described in paragraphs (a)(1), (2), (3), (4), (5), (6), (7) and (10) of this section. In addition, every permittee or licensee of a TV station shall maintain for public inspection a file containing material described in paragraph (a)(8) of this section; every permittee or licensee of an AM or FM station shall maintain for public inspection a file containing material described in paragraph (a)(9) of this section. The material to be contained in the file is as follows:

(1) A copy of every application tendered for filing, with respect to which local public notice is required to be given under the provisions of § 73.3580 or § 73.3594; and all exhibits, letters and other documents tendered for filing as part thereof; all amendments thereto, copies of all documents incorporated therein by reference, all correspondence between the FCC and the applicant pertaining to the application after it has been tendered for filing, and copies of Initial Decisions and Final Decisions in hearing cases pertaining thereto, which according to the provisions of §§ 0.451 through 0.461 of the rules are open for public inspection at the offices of the FCC. Information incorporated by reference which is already in the local file need not be duplicated if the entry making the reference sufficienty identifies the information so that it may be found in the file, and if there has been no change in the document since the date of filing and the applicant, after making the reference, so states. If petitions to deny are filed against the application, and have been duly served on the applicant, a statement that such a petition has been filed shall appear in the local file together with the name and address of the party filing the petition. The file shall also contain a copy of every written citizen agreement. For purposes of this section, a citizen agreement is a written agreement between a broadcast applicant, permittee, or licensee, and one or more citizens or citizen groups, entered for primarily noncommercial purposes. This definition includes those agreements that deal with goals or proposed practices directly or indirectly affecting station operation in the public interest, in areas such as—but not limited to—community ascertainment, programming, and employment. It excludes common commercial agreements such as advertising con-

tracts; union, employment, and personal services contracts; network affiliation, syndication, program supply contracts and so on. However, the mere inclusion of commercial terms in a primarily noncommercial agreement—such as a provision for payment of fees for future services of the citizen-parties (see "Report and Order," Docket 19518, 57 FCC 2d 494 1976))—would not cause the agreement to be considered commercial for purposes of this section.

NOTE: Applications tendered for filing on or before May 13, 1965, which are subsequently designated for hearing after May 13, 1965, with local notice being given pursuant to the provisions of § 73.3594, and material related to such applications, need not be placed in the file required to be kept by this section. Applications tendered for filing after May 13, 1965, which contain major amendments to applications tendered for filing on or before May 13, 1965, with local notice of the amending application being given pursuant to the provisions of § 73.3580, need not be placed in the file required to be kept by this section.

(2) A copy of every application tendered for filing by the licensee or permittee for such station which is not included in paragraph (a)(1) of this section and which involves changes in program service, which requests an extension of time in which to complete construction of a new station, or which requests consent to involuntary assignment or transfer, or to voluntary assignment or transfer not resulting in a substantial change in ownership or control and which may be applied for on FCC Form 316; and copies of all exhibits, letters, and other documents filed as part thereof, all amendments thereto, all correspondence between the FCC and the applicant pertaining to the application after it has been tendered for filing, and copies of all documents incorporated therein by reference, which according to the provisions of §§ 0.451 through 0.461 of the rules are open for public inspection at the offices of the FCC. Information incorporated by reference which is already in the local file need not be duplicated if the entry making the reference sufficiently identifies the information so that it may be found in the file, and there has been no change in the document since the date of filing and the licensee, after making the reference, so states. If petitions to deny are filed against the application, and have been duly served on the applicant, a statement that such a petition has been filed shall appear in the local file together with the name and address of the party filing the petition.

NOTE: The engineering section of the applications mentioned in paragraphs (a)(1) and (2) of this section, and material related to the engineering section, need not be kept in the file required to be maintained by this paragraph. If such engineering section contains service contour maps submitted with that section, copies of such maps and information (State, county, city, street address, or other identifying information) showing main studio and transmitter location shall be kept in the file.

(3) A copy of every ownership report or supplemental ownership report filed by the licensee or permittee for such station after May 13, 1965, pursuant to the provisions of this part; and copies of all exhibits, letters, and other documents filed as part thereof, all amendments thereto, all correspondence between the permittee or licensee and the FCC pertaining to the reports after they have been filed, and all documents incorporated therein by reference, including contracts listed in such reports in accordance with the provisions of § 73.3615(a)(4)(i) and which according to the provisions of §§ 0.451 through 0.461 of the rules are open for public inspection at the offices of the FCC. Information incorporated by reference which is already in the local file need not be duplicated if the entry making the reference sufficiently identifies the information so that it may be found in the file, and if there has been no change in the document since the date of filing and the licensee or permittee, after making the reference, so states.

(4) Such records as are required to be kept by § 73.1940 concerning broadcasts by candidates for public office.

(5) A copy of every annual employment report filed by the licensee or permittee for such station pursuant to the provisions of this part; and copies of all exhibits, letters and other documents filed as part thereof, all amendments thereto, and all correspondence between the permittee or licensee and

the FCC pertaining to the reports after they have been filed and all documents incorporated therein by reference and which according to the provisions of §§ 0.451 through 0.461 of the rules are open for public inspection at the offices of the FCC.

(6) The Public and Broadcasting—A Procedure Manual (see FCC 74-942, 39 FR 32288, September 5, 1974).

(7) Letters received from members of the public as are required to be retained by § 73.1202.

(8) For commerical TV broadcast stations, every three months a list of programs that have provided the station's most significant treatment of community issues during the preceding three month period. The list for each calendar quarter is to be filed by the tenth day of the succeeding calendar quarter (*e.g.*, January 10 for the quarter October-December, April 10 for the quarter January-March, etc.). The list include a brief narrative describing what issues were given significant treatment and the programming that provided this treatment. The description of the programs should include, but is not limited to, the time, date, duration and title of each program in which the issue was treated.

(9) For commercial AM and FM broadcast stations, every three months a list of programs that have provided the station's most significant treatment of community issues during the preceding three month period. The list for each calendar quarter is to be filed by the tenth of the succeeding calendar quarter (*e.g.*, January 10 for the quarter October-December, April 10 for the quarter January-March, etc.). The list shall include a brief narrative describing what issues were given significant treatment and the programming that provided this treatment. The description of the programs should include, but is not limited to, the time, date, duration and title of each program in which the issue was treated.

(10) Each applicant for renewal of license shall, within 7 days of the last day of broadcast of the local public notice of filing announcements required pursuant to § 73.3580(h), place in the station's local public inspection file a statement certifying compliance with this requirement. The dates and times that the pre-filing and post-filing notices were broadcast and the text thereof shall be made part of the certifying statement.

(b) *Responsibility in case of assignment or transfer.* (1) In cases involving applications for consent to assignment of broadcast station construction permits or licenses, with respect to which public notice is required to be given under the provisions of § 73.3580 or § 73.3594, the file mentioned in paragraph (a) of this section shall be maintained by the assignor. If the assignment is consented to by the FCC and consummated, the assignee shall maintain the file commencing with the date on which notice of the consummation of the assignment is filed with the FCC. The file maintained by the assignee shall cover the period both before and after the time when the notice of consummation of assignment was filed. The assignee is responsible for obtaining copies of the necessary documents from the assignor or from the FCC files.

(2) In cases involving applications for consent to transfer of control of a permittee or licensee of a broadcast station, the file mentioned in paragraph (a) of this section shall be maintained by the permittee or licensee.

(c) *Station to which reports pertain.* The file need contain only applications, ownership reports, and related material that concern the station for which the file is kept. Applicants, permittees, and licensees need not keep in the file copies of such applications, reports, and material which pertain to other stations with regard to which they may be applicants, permittees, or licensees, except to the extent that such information is reflected in the materials required to be kept under the provisions of this section.

(d) *Location of records.* The file shall be maintained at the main studio of the station, where such studio is located in the community to which the station is licensed or where such studio is located outside of the community of license pursuant to authorization granted under § 73.1125(a) of the rules prior to July 16, 1987, or at any accessible place (such as a public registry for documents or an attorney's office) in the community to which the station is or is proposed to be licensed. The file shall be available for public inspection at any time during regular business hours.

(e) *Period of Retention.* The records specified in paragraph (a)(4) of this section shall be retained for periods specified in § 73.1940 (2 years). The manual specified in paragraph (a)(6) of this section shall be retained indefinitely. The letters specified in paragraph (a)(7) of this section shall be retained for the period specified in §73.1202 (3 years). The "significant treatment of community issues" list specified in paragraphs (a)(8) and (9) of this section shall be retained for the term of license (5 and 7 years for TV and radio, respectively). The certification specified in paragraph (a)(10) of this section shall be retained for the period specified in § 73.3580 (for as long as the application to which it refers). The records specified in paragraphs (a)(1), (2), (3), and (5) of this section shall be retained, as follows:

(1) The applicant for a construction permit for a new station shall maintain such a file so long as the application is pending before the FCC or any proceeding involving that application is pending before the courts. (If the application is granted, paragraph (e)(2) of this section shall apply.)

(2) The permittee or licensee shall maintain such a file so long as an authorization to operate the station is outstanding, and shall permit public inspection of the material as long as it is retained by the licensee even though the request for inspection is made after the conclusion of the required retention period specified in this paragraph. However, material which is voluntarily retained after the required retention time may be kept in a form and place convenient to the licensee and shall be made available to the inquiring party, in good faith after written request, at a time and place convenient to both the party and the licensee.

Applications and related material placed in the file shall be retained for a period beginning with the date that they are tendered for filing and ending with the expiration of one license term (five (5) years for television licensees or seven (7) years for radio licensees) or until the grant of the first renewal application of the television or radio broadcast license in question, whichever is later, with two exceptions:

(i) Engineering material pertaining to a former mode of operation need not be retained longer than 3 years after a station commences operation under a new or modified mode; and

(ii) Material having a substantial bearing on a matter which is the subject of a claim against the licensee, or relating to an FCC investigation or a complaint to the FCC of which the licensee has been advised, shall be retained until the licensee is notified in writing that the material may be discarded, or, if the matter is a private one, the claim has been satisfied or is barred by statute of limitations. Where an application or related material incorporates by reference material in earlier applications and material concerning programming and related matters (section IV and related material), the material so referred to shall be retained as long as the application referring to it. If a written agreement is not incorporated in an application tendered for filing with the FCC, the starting date of the retention period for that agreement is the date the agreement is executed.

(f) Copies of any material required to be in the public file of any applicant for a construction permit, or permittee or licensee of any commercial TV or radio station shall be available for machine reproduction upon request made in person, provided the requesting party shall pay the reasonable cost of reproduction. Requests for machine copies shall be fulfilled at a location specified by the applicant, permittee or licensee, within a reasonable period of time which, in no event, shall be longer than seven days unless reproduction facilities are unavailable in the applicant's, permittee's, or licensee's community. The applicant, permittee or licensee is not required to honor requests made by mail, but may do so if it chooses.

[50 FR 8630, Mar. 4, 1985, as amended at 51 FR 20292, 20293, June 4, 1986; 53 FR 17046, May 13, 1988; 53 FR 32901, Aug. 29, 1988]

§ 73.3527 Local public inspection file of noncommercial educational stations.

(a) *Records to be maintained.* Every applicant for a construction permit for a new station in the noncommercial educational broadcast servcies shall maintain for public inspection a file containing the material in paragraph (a)(1) of this section. Every permittee or licensee of a station in the noncommercial educational broadcast services shall maintain for public inspection a file containing the material described in paragraphs (a) (1) through (9) of this section. The material to be contained in the file is as follows:

(1) A copy of every application tendered for filing with respect to which local public notice is required to be given under the provisions of § 73.3580 or § 73.3594; and all exhibits, letters and other documents tendered for filing as part thereof, all amendments thereto, copies of all documents incorporated therein by reference, all correspondence between the FCC And the applicant pertaining to the application after it has been tendered for filing, and copies of Initial Decisions and Final Decisions in hearing cases pertaining thereto, which according to the provisions of §§ 0.451 through 0.461 of the rules are open for public inspection at the offices of the FCC. Information incorporated by reference which is already in the local file need not be duplicated if the entry making the reference sufficiently identifies the information so that it may be found in the file, and if there has been no change in the document since the date of filing and the applicant, after making the reference, so states. If petitions to deny are filed against the application, and have been duly served on the applicant, a statement that such a petition has been filed shall appear in the local file together with the name and address of the party filing the petition.

NOTE: Applications tendered for filing on or before May 13, 1965, which were subsequently designated for hearing after May 13, 1965, with local notice being given pursuant to the provisions of § 73.3594, and material related to such applications, need not be placed in the file required to be kept by this section. Materials tendered for filing after May 13, 1965, whihc contain major amendments to applications tendered for filing on or before May 13, 1965, which local notice of the amending application being given pursuant to the provisions of § 73.3580 need not be placed in the file required to be kept by this section.

(2) A copy of every application tendered for filing by the licensee or permittee for such station after May 13, 1965, pursuant to the provisions of this part, which is not included in paragraph (a)(1) of this section and which involves changes in program service, which requests an extension of time in which to complete construction of a new station, or which requests consent to involuntary assignment or transfer, or to voluntary assignment or transfer not resulting in a substantial change in ownership or control and which may be applied for on FCC Form 316; and copies of all exhibits, letters, and other documents filed as part thereof, all amendments thereto, all correspondence between the FCC and the applicant pertaining to the application after it has been tendered for filing, and copies of all documents incorporated therein by reference, which according to the provisions of §§ 0.451 through 0.461 of the rules are open for public inspection at the offices of the FCC. Information incorporated by reference which is already in the local file need not be duplicated if the entry making the reference sufficiently identifies the information so that it may be found in the file, and there has been no change in the document since the date of filing and the licensee, after making the reference so states. If petitions to deny are filed against the application, and have been duly served on the applicant, a statement that such a petition has been filed shall appear in the local file together with the name and address of the party filing the petition.

NOTE: The engineering section of the applications mentioned in paragraphs (a) (1) and (2) of this section, and material related to the engineering section, need not be kept in the file required to be maintained by this paragraph. If such engineering section contains service contour maps submitted with that section, copies of such maps and information (State, county, city, street address or other identifying information) showing main studio and transmitter location shall be kept in the file.

(3) A copy of contracts listed in ownership reports filed in accordance with the provisions of § 73.3615(e) and which according to the provisions of §§ 0.451 through 0.461 of the rules are open for public inspection at the offices of the FCC. Information incorporated by reference which is already in the local file need not be duplicated if the enty making the reference sufficiently identifies the information so that it may be found in the file, and if there has been no change in the document since the date of filing and the licensee or permittee, after making the reference, so states.

(4) Such records as are required to be kept by § 73.1940, "Broadcasts by candidates for public office.

(5) A copy of every annual employment report filed by the licensee or permittee for such station pursuant to the provisions of this Part; and copies of all exhibits, letters and other documents filed as part thereof, all amendments thereto, all correspondence between the permittee or licensee and the FCC pertaining to the reports after they have been filed and all documents incorporated therein by reference and which, according to the provisions of §§ 0.451 through 0.461 of the rules, are open for public inspection at the office of the FCC.

(6) The Public and Broadcasting: Revised Edition (see FCC 74-942, 39 FR 32288, September 5, 1974).

(7) For nonexempt noncommercial educational broadcast stations, every three months a list of programs that have provided the station's most significant treatment of community issues during the preceding three month period. The list for each calendar quarter is to be filed by the tenth day of the succeeding calendar quarter (e.g. January 10 for the quarter October-December, April 10 for the quarter January-March, etc.). The list shall include a brief narrative describing what issues were given significant treatment and the programming that provided this treatment. The description of the programs should include, but is not limited to, the time, date, duration and title of each program in which the issue was treated.

(8) The lists of donors supporting specific programs.

(9) Each applicant for renewal of license shall, within 7 days of the last day of broadcast of the local public notice of filing announcements required pursuant to § 73.3580(h), place in the station's public inspection file a statement certifying compliance with this requirement. The dates and times that the pre-filing and post-filing notices were broadcast and the text thereof shall be made part of the certifying statement.

(b) *Responsibility in case of assignment or transfer.* (1) In cases involving applications for consent to assignment of broadcast station construction permits or licenses, with respect to which public notice is required to be given under the provisions of § 73.3580 or § 73.3594, the file mentioned in paragraph (a) of this section shall be maintained by the assignor. If the assignment is consented to by the FCC, and consummated, the assignee shall maintain the file commencing with the date on which notice of the consummation of the assignment is filed with the FCC. The file maintained by the assignee shall cover the period both before and after the time when the notice of consummation of assignment was filed. The assignee is responsible for obtaining copies of the necessary documents from the assignor or from the FCC files.

(2) In cases involving applications for consent to transfer of control of a permittee or licensee of a broadcast station, the file mentioned in paragraph (a) of this section shall be maintained by the permittee or licensee.

(c) *Station to which records pertain.* The file need contain only applications, ownership reports, and related material that concern the station for which the file is kept. Applicants, permittees and licensees need not keep in the file copies of such applications, reports and material which pertain to other stations with regard to which they may be applicants, permittees, or licensees, except to the extent that such information is reflected in the materials required to be kept under the provisions of this section.

(d) *Location of records.* The file shall be maintained at the main studio of the station, where such studio is located in the community to which the station is licensed or where such studio is located outside of the community of license pursuant to authorization granted under § 73.1125(a) of the rules prior to July 16, 1987, or at any accessible place (such as a public registry for documents or an attorney's office) in the community to which the station is or is proposed to be licensed. The file shall be available for public inspection at any time during regular business hours.

(e) *Period of retention.* The records specified in paragraph (a)(4) of this section shall be retained for the period specified in § 73.1940 (two years). The manual specified in paragraph (a)(6) of this section shall be retained indefinitely. The issues/programs list specified (a)(7) shall be retained for the term of the license (5 years and 7 years for TV and radio respectively). The donor lists specified in paragraph (a)(8) of this section shall be retained for two years. The certification specified in paragraph (a)(9) of this section shall be retained for the period specified in § 73.3580 (for as long as the application to which it refers). The records specified in paragraphs (a)(1), (2), (3), and (5) of this section must be retained as follows:

(1) The applicant for a construction permit for a new station shall maintain such a file so long as the proceeding in which that application was filed is pending before the FCC or any proceeding involving that application is pending before the courts. (If the application is granted, paragraph (e)(2) of this section shall apply.)

(2) The permittee or licensee shall maintain such a file so long as an authorization to operate the station is outstanding, and shall permit public inspection of the material as long as it is retained by the licensee even though the request for inspection is made after the conclusion of the required retention period specified in this paragraph. However, material which is voluntarily retained after the required retention time may be kept in a form and place convenient to the licensee and shall be made available to the inquiring party, in good faith after written request, at a time and place convenient to both the party and the licensee.

Applications and related material placed in the file shall be retained for a period beginning with the date that they are tendered for filing and ending with the expiration of one license term (five (5) years for television licensees or seven (7) years for radio licensees) or until the grant of the first renewal application of the television or radio broadcast license in question, whichever is later, with two exceptions:

(i) Engineering material pertaining to a former mode of operation need not be retained longer than 3 years after a station commences operation under a new or modified mode; and

(ii) Material having a substantial bearing on a matter which is the subject of a claim against the licensee, or relating to an FCC investigation or a complaint to the FCC of which the licensee has been advised, shall be retained until the licensee is notified in writing that the material may be discarded, or, if the matter is a private one, the claim has been satisfied or is barred by statutes of limitations. Where an application or related material incorporates by reference material in an earlier application and material concerning programming and related matters (section IV and related material), the material so referred to shall be retained as long as the application referring to it.

(f) Copies of any material required to be in the public file of any applicant for a construction permit, or permittee or licensee of any noncommercial educational TV or radio station shall be available for machine reproduction upon request made in person, provided the requesting party shall pay the reasonable costs of reproduction. Requests for machine copies shall be fulfilled at a location specified by the applicant, permittee or licensee, within a reasonable period of time which, in no event, shall be longer than seven days unless reproduction facilities are unavailable in the applicant's, permittee's or licensee's community. The applicant, permittee or licensee is not required to honor requests made by mail but may do so if it chooses.

[50 FR 8632, Mar. 4, 1985, as amended at 53 FR 15225, Apr. 28, 1988; 53 FR 17047, May 13, 1988; 53 FR 32901, Aug. 29, 1988]

§ 73.3533 Application for construction permit or modification of construction permit.

(a) Application for construction permit, or modification of a construction permit, for a new facility or change in an existing facility is to be made on the following forms:

(1) FCC Form 301, "Application for Authority to Construct or Make Changes in an Existing Commercial Broadcast Station."

(2) FCC Form 309, "Application for Authority to Construct or Make Changes in an Existing International or Experimental Broadcast Stations."

(3) FCC Form 313, "Application for Authorization in the Auxiliary Broadcast Services."

(4) FCC Form 330, "Application for Authorization to Construct New or Make Changes in an Instructional Television Fixed and/or Response Station(s), or to Assign to Transfer Such Station(s)."

(5) FCC Form 340, "Application for Authority to Construct or Make Changes in a Noncommercial Educational Broadcast Station."

(6) FCC Form 346, "Application for Authority to Construct or Make Changes in a Low Power TV, TV Translator or TV Booster Station."

(7) FCC Form 349, "Application for Authority to Construct or Make Changes in an FM Translator or FM Booster Station."

(b) The filing of an application for modification of construction permit does not extend the expiration date of the construction permit. Extension of the expiration date must be applied for on FCC Form 307, in accordance with the provisions of § 73.3534.

[44 FR 38494, July 2, 1979, as amended at 47 FR 28388, June 30, 1982; 49 FR 32582, Aug. 15, 1984; 50 FR 40016, Oct. 1, 1985; 53 FR 36788, Sept. 22, 1988]

§ 73.3534 Application for extension of construction permit or for construction permit to replace expired construction permit.

(a) Application for extension of time within which to construct a station shall be filed on FCC Form 307, "Application for Extension of Broadcast Construction Permit or to Replace Expired Construction Permit." The application shall be filed at least 30 days prior to the expiration date of the construction permit if the facts supporting such application for extension are known to the applicant in time to permit such filing. In other cases, an application will be accepted upon a showing satisfactory to the FCC of sufficient reasons for filing within less than 30 days prior to the expiration date.

(b) Applications for extension of time to construct broadcast stations, with the exception of International Broadcast and Instructional TV Fixed stations, will be granted only if one of the following three circumstances have occurred:

(1) Construction is complete and testing is underway looking toward prompt filing of a license application;

(2) Substantial progress has been made *i.e.*, demonstration that equipment is on order or on hand, site acquired, site cleared and construction proceeding toward completion; or

(3) No progress has been made for reasons clearly beyond the control of the permittee (such as delays caused by governmental budgetary processes and zoning problems) but the permittee has taken all possible steps to expeditiously resolve the problem and proceed with construction.

(c) Applications for extension of time to construct International Broadcast and Instructional TV Fixed stations will be granted upon a specific and detailed showing that the failure to complete was due to causes not under the control of the permittee, or upon a specific and detailed showing of other sufficient to justify an extension.

(d) If an application for extension of time within which to construct a station is approved, such an extension will be limited to a period of no more than 6 months except when as assignment or transfer has been approved that provides for a longer period up to a maximum of 12 months from the date of consummation.

(e) Application for a construction permit to replace an expired construction permit shall be filed on FCC Form 307. Such applications must be filed within 30 days of the expiration date of the authorization sought to be replaced. If approved, such authorization shall specify a period of not more than 6 months within which construction shall be completed and application for license filed.

[50 FR 52779, Dec. 26, 1985, as amended at 53 FR 36788, Sept. 22, 1988]

§ 73.3535 Application to modify authorized but unbuilt facilities, or to assign or transfer control of an unbuilt facility.

(a) If a permittee finds it necessary to file either an application to modify its authorized, but unbuilt facilities, or an assignment/transfer application, such application shall be filed within the first 9 months of the issuance of the original construction permit for radio and other broadcast and auxiliary stations, or within 12 months of the issuance of the original construction permit for television facilities. Before such an application can be granted, the permittee or assignee must certify that it will immediately begin building after the modification is granted or the assignment is consummated.

(b) Modification and assignment applications filed after the time periods stated in paragraph (a) will not be granted absent a showing that one of the following three criteria apply: (1) Construction is complete and testing is underway looking toward prompt filing of a license application; (2) substantial progress has been made *i.e.*, demonstration that equipment is on order or on hand, site acquired, site cleared and construction proceeding toward completion; or (3) no progress has been made for reasons clearly beyond the control of the permittee (such as delays caused by governmental budgetary processes and zoning problems) but the permittee has taken all possible steps to expeditiously resolve the problem and proceed with construction. A certification by the permittee or the assignee that it immediately will begin building after the modification is granted or the assignment is consummated is also necessary. A seller must make the "one of three criteria" showing in an assignment application.

(c) If a modification is granted, the time period allowed for construction will be 6 months from the issuance of the authorization to modify or the remainder of the construction period, whichever is longer. Also, in the case of an assignment, the time period allowed for construction will be 12 months from the consummation of the assignment or the remainder of the construction period, whichever is longer. The extension will be given subject to the condition that the modification is completed or the assignment is consummated. Failure to modify or consummate within the time allowed will result in cancellation of the construction permit.

(d) We will not entertain an application for modification of an authorized but unbuilt facility or an application for assignment or transfer of control of an unbuilt facility if filed after the expiration of the initial construction period.

[50 FR 52779, Dec. 26, 1985]

§ 73.3536 Application for license to cover construction permit.

(a) The application for station license shall be filed by the permittee pursuant to the requirements of § 73.1620 Program tests.

(b) The following application forms shall be used:

(1) FCC Form 302, "Application for a New Broadcast Station License."

(2) FCC Form 310, "Application for an International or Experimental Broadcast Station License."

(3) FCC Form 313, "Application for Authorization in the Auxiliary Broadcast Services."

(4) FCC Form 330-L "Application for Instructional Television Fixed Station License."

(5) FCC Form 347, "Application for a Low Power TV, TV Translator or TV Booster Station License."

(6) FCC Form 350, "Application for an FM Translator or FM Booster Station License."

[44 FR 38495, July 2, 1979, as amended at 49 FR 32582, Aug. 15, 1984; 50 FR 40016, Oct. 1, 1985; 51 FR 18451, May 20, 1986; 51 FR

32088, Sept. 9, 1986; 52 FR 31400, Aug. 20, 1987; 53 FR 36788, Sept. 22, 1988]

§ 73.3537 Application for license to use former main antenna as an auxiliary.

A licensee may apply on FCC Form 302 for authority to use a formerly licensed main antenna system as an auxiliary antenna.

[51 FR 32088, Sept. 9, 1986]

§ 73.3538 Application to make changes in an existing station.

Where prior authority from the FCC is required to make changes in an existing station the following procedures shall be used to request that authority:

(a) An application for a construction permit using the forms specified in § 73.3533 must be filed for authority to make the following changes:

(1) Any change involving frequency, power or location of the station.

(2) A change in the hours of operation of an AM station, where the hours of operation are specified on the station license.

(3) The installation of a transmitter which has not been authorized by the FCC for use by licensed broadcast stations.

(4) Any change in the location, height, or directional radiating characteristics of the antenna or antenna system.

(5) To move the main studio location of an AM station to a location outside the principal community contour or to move the studio from one location outside the principal community contour to another such location (other than to a point within the principal community). See § 73.1125.

(6) To move the main studio of an FM station to a location outside the principal community contour or to move the studio from one location outside the principal community contour to another such location (other than to the collocated studio-transmitter site of a commonly-owned AM station licensed to the same community or to a point within the principal community). See § 73.1125.

(7) To move the main studio of a TV station to a location outside the principal community contour or to move the studio from one location outside the principal community contour to another such location (other than to a point within the principal community). See § 73.1125.

(b) An informal application filed in accordance with § 73.3511 is to be used to obtain authority to make the following changes in the station authorization:

(1) To specify a new AM station directional antenna field monitoring point as a substitute for one that is no longer suitable or available, such as due to construction. The request is to include sufficient measurement data taken at the new monitoring point to establish its reliability in comparison with data taken at the old monitoring point on the same radial, the routing directions to the new point, a location photograph, and such other information as the FCC may request.

(2) To modify or discontinue the obstruction marking or lighting of the antenna supporting structure where that specified on the station authorization either differs from that specified in FCC Rules, part 17, or is not appropriate for other reasons.

[44 FR 38495, July 2, 1979, as amended at 44 FR 69935, Dec. 5, 1979; 49 FR 4000, Feb. 1, 1984; 52 FR 21685, June 9, 1987]

§ 73.3539 Application for renewal of license.

(a) Unless otherwise directed by the FCC, an application for renewal of license shall be filed not later than the first day of the fourth full calendar month prior to the expiration date of the license sought to be renewed, except that applications for renewal of license of an experimental broadcast station shall be filed not later than the first day of the second full calendar month prior to the expiration date of the license sought to be renewed. If any deadline prescribed in this paragraph falls on a nonbusiness day, the cutoff shall be the close of business of the first full business day thereafter.

(b) No application for renewal of license of any broadcast station will be considered unless there is on file with the FCC the information currently required by §§ 73.3612 through 73.3615, inclusive, for the particular class of station.

(c) Whenever the FCC regards an application for a renewal of license as essential to the proper conduct of a hearing or investigation, and specifically directs that it be filed by a date certain, such application shall be filed within the time thus specified. If the licensee fails to file such application within the prescribed time, the hearing or investigation shall proceed as if such renewal application had been received.

(d) Renewal application forms titles and numbers are listed in § 73.3500, Application and Report Forms.

[44 FR 38495, July 2, 1979, as amended at 47 FR 28388, June 30, 1982; 49 FR 32582, Aug. 15, 1984]

§ 73.3540 Application for voluntary assignment or transfer of control.

(a) Prior consent of the FCC must be obtained for a voluntary assignment or transfer of control.

(b) Application should be filed with the FCC at least 45 days prior to the contemplated effective date of assignment or transfer of control.

(c) Application for consent to the assignment of construction permit or license must be filed on FCC Form 314 "Assignment of license" or FCC Form 316 "Short form" (See paragraph (f) of this section).

(d) Application for consent to the transfer of control of a corporation holding a construction permit or license must be filed on FCC Form 315 "Transfer of Control" or FCC Form 316 "Short form" (see paragraph (f) of this section).

(e) Application for consent to the assignment of construction permit or license or to the transfer of control of a corporate licensee or permittee for an FM or TV translator station, a low power TV station and any associated auxiliary station, such as translator microwave relay stations and UHF translator booster stations, only must be filed on FCC Form 345 "Application for Transfer of Control of Corporate Licensee or Permittee, or Assignment of License or Permit for an FM or TV translator Station, or a Low Power TV Station."

(f) The following assignment or transfer applications may be filed on FCC "Short form" 316:

(1) Assignment from an individual or individuals (including partnerships) to a corporation owned and controlled by such individuals or partnerships without any substantial change in their relative interests;

(2) Assignment from a corporation to its individual stockholders without effecting any substantial change in the disposition of their interests;

(3) Assignment or transfer by which certain stockholders retire and the interest transferred is not a controlling one;

(4) Corporate reorganization which involves no substantial change in the beneficial ownership of the corporation;

(5) Assignment or transfer from a corporation to a wholly owned subsidiary thereof or vice versa, or where there is an assignment from a corporation to a corporation owned or controlled by the assignor stockholders without substantial change in their interests; or

(6) Assignment of less than a controlling interest in a partnership.

[44 FR 38496, July 2, 1979, as amended at 48 FR 21486, May 12, 1983; 49 FR 47843, Dec. 7, 1984; 50 FR 32416, Aug. 12, 1985]

§ 73.3541 Application for involuntary assignment of license or transfer of control.

(a) The FCC shall be notified in writing promptly of the death or legal disability of an individual permittee or licensee, a member of a partnership, or a person directly or indirectly in control of a corporation which is a permittee or licensee.

(b) Within 30 days after the occurrence of such death or legal disability, an application on FCC Form 316 shall be filed requesting consent to involuntary assignment of such permit or license or for involuntary transfer of control of such corporation to a person or entity legally qualified to succeed to the foregoing interests under the laws of the place having jurisdiction over the estate involved.

[44 FR 38496, July 2, 1979]

§ 73.3542 Application for emergency authorization.

(a) Authority may be granted, on a temporary basis, in extraordinary circumstances requiring emergency operation to serve the public interest. such situations include: emergencies involving danger to life and property; a national emergency proclaimed by the President or the Congress of the U.S.A and; the continuance of any war in which the United States is engaged, and where such action is necessary for the national defense or security or otherwise in furtherance of the war effort.

(1) An informal application may be used. The FCC may grant such construction permits, station licenses, modifications or renewals thereof, without the filing of a formal application.

(2) No authorization so granted shall continue to be effective beyond the period of the emergency or war requiring it.

(3) Each individual request submitted under the provisions of this paragraph shall contain, as a minimum requirement, the following information:

(i) Name and address of applicant.

(ii) Location of proposed installation or operation.

(iii) Official call letters of any valid station authorization already held by applicant and the station location.

(iv) Type of service desired (not required for renewal or modification unless class of station is to be modified).

(v) Frequency assignment, authorized transmitter power(s), authorized class(es) of emission desired (not required for renewal; required for modification only to the extent such information may be involved).

(vi) Equipment to be used, specifying the manufacturer and type or model number (not required for renewal; required for modification only to the extent such information may be involved).

(vii) Statements to the extent necessary for the FCC to determine whether or not the granting of the desired authorization will be in accordance with the citizenship eligibility requirements of section 310 of the Cummunications Act.

(viii) Statement of facts which, in the opinion of the applicant, constitute an emergency to be found by the FCC for the purpose of this section. This statement must also include the estimated duration of the emergency and if during an emergency or war declared by the President or Congress, why such action, without formal application, is necessary for the national defense or security or in furtherance of the war effort.

(b) Emergency operating authority issued under this section may be cancelled or modified by the FCC without prior notice or right to hearing. See also § 73.1250, Broadcasting Emergency Information, for situations in which emergency operation may be conducted without prior authorization, and § 73.1635, Special Temporary Authorization (STA), for temporary operating authorizations necessitated by circumstances not within the ambit of its section.

[50 FR 30948, July 31, 1985]

§ 73.3543 Application for renewal or modification of special service authorization.

(a) No new special service authorization will be issued. However, consideration will be given to renewal or modification of a special service authorization which was outstanding on February 3, 1958, providing a satisfactory showing has been made in regard to the following, among others:

(1) That the requested operation may not be granted on a regular basis under the existing rules governing the operation of AM stations;

(2) That experimental operation is not involved as provided for by § 73.1510 (Experimental authorizations); and

(3) That public interest, convenience and necessity will be served by the authorization requested.

[44 FR 38496, July 2, 1979]

§ 73.3544 Application to obtain a modified station license.

Where prior authority from the FCC is not required to make certain changes in the station authorization or facilities, but a modified station license must be obtained, the following procedures shall be used to obtain modification of the station license:

(a) An application for a station license using the forms specified in § 73.3536 shall be used to cover the following changes:

(1) A change in the type of FM or TV transmitting antenna where prior authority from the FCC is not required to make such a change. See § 73.1690, Modification of transmission systems.

(2) A change in the output power of FM or TV aural or visual transmitters to accommodate a change in the antenna type or transmission line.

(b) An informal application filed according to the procedures specified in § 73.3511(b) shall be used to cover the following changes:

(1) A correction of the routing instructions and description of an AM station directional antenna system field monitoring point, when the point itself is not changed.

(2) A change in the type of AM station directional antenna monitor. See § 73.69.

(3) A change in the location of the station main studio when prior authority to move the main studio location is not required.

(4) The location of a remote control point of an AM or FM station when prior authority to operate by remote control is not required.

(c) A change in the name of the licensee where no change in ownership or control is involved may be accomplished by written notification by the licensee to the Commission.

[44 FR 38497, July 2, 1979, as amended at 45 FR 20483, Mar. 28, 1980; 50 FR 32416, Aug. 12, 1985]

§ 73.3545 Application for permit to deliver programs to foreign stations.

Application under section 325(b) of the Communications Act for authority to locate, use, or maintain a broadcast studio in connection with a foreign station consistently received in the United States, should be made on FCC Form 308, "Application for Permit to Deliver Programs to Foreign Broadcast Stations." An informal application may be used by applicants holding an AM, FM or TV broadcast station license or construction permit. Informal applications must, however, contain a description of the nature and character of the programming proposed, together with other information requested on Page 4 of Form 308.

[44 FR 38497, July 2, 1979]

§ 73.3549 Requests for extension of authority to operate without required monitors, indicating instruments, and EBS attention signal devices.

Requests for extension of authority to operate without required monitors, transmission system indicating instruments, or devices for off-the-air monitoring and generating of the EBS Attention Signal should be made to the Engineer in Charge of the radio district in which the station is operating. Such requests must contain information as to when and what steps were taken to repair or replace the defective equipment and a brief description of the alternative procedures being used while the defective equipment is out of service.

[44 FR 38497, July 2, 1979]

§ 73.3550 Requests for new or modified call sign assignments.

(a) Requests for new or modified call sign assignments for broadcast stations shall be made by letter to the Secretary, FCC, Washington, DC 20554. An original and one copy of the letter shall be submitted. Incomplete or otherwise defective filings will be returned by the FCC. As many as five call sign choices, listed in decending order of preference, may be included in a single request. A call sign may not be reserved.

(b) No request for a new call sign assignment will be accepted from an applicant for a new station until the FCC has granted a construction permit. Failure by the permittee of a new station to request the assignment of a specific call sign within 30 days of grant of the construction permit will result in the FCC, on its own motion, assigning an appropriate call sign.

(c) An applicant for transfer or assignment of an outstanding construction permit or license may, in accordance with this section, request a new call sign assignment at the time the application for transfer or assignment is filed, or at any time thereafter. In the absence of written consent of the proposed transferor or assignor, no change in call sign assignment will be made effective until such application is granted by the FCC and the transaction consummated.

(d) Where an application is granted by the FCC for transfer or assignment of the construction permit or license of a station whose existing call sign conforms to that of a commonly owned station not part of the transaction, the licensee shall, within 30 days after consummation, request a different call sign or submit a statement of written consent to retain the conforming call sign from the existing owner and the licensee of any other station that may be using the station's call sign. In such cases, should a suitable application or proper consent statement not be submitted within that period of time, the FCC will, on its own motion, select an appropriate call sign and effect the change in call sign assignment.

(e) Call signs beginning with the letter "K" will not be assigned to stations located east of the Mississippi River, nor will call signs beginning with the letter "W" be assigned to stations located west of the Mississippi River.

(f) Only four-letter call signs (plus FM or TV suffixes, if used) will be assigned. However, subject to the other provisions of this section, a call sign of a station may be conformed to a commonly owned station holding a three-letter call sign assignment (plus FM or TV suffixes, if used).

(g) Subject to the foregoing limitations, applicants may request call signs of their choice if the combination is available. Objections to the assignment of requested call signs will not be entertained at the FCC. However, this does not hamper any party from asserting such rights as it may have under private law in some other forum. Should it be determined by an appropriate forum that a station should not utilize a particular call sign, the initial assignment of a call sign will not serve as a bar to the making of a different assignment.

(h) Call signs are assigned on a "first-come-first-served" basis. Receipt by the FCC of a request for an available call sign blocks the acceptance of competing requests until the first received request is processed to completion. In the case of requests for the same call sign being received on the same date at the FCC, the assignment (if otherwise grantable) will be made to the station having the longest continuous record of broadcasting operation under substantially unchanged ownership and control. However, involuntary and *pro forma* assignments and transfers will not be taken into account in determining priority.

NOTE: The provisions of paragraph (h) of this section shall not apply to a licensee requesting a transfer to another frequency where the existing and new facilities serve substantially the same area (i.e. where at least one of the stations serves both communities of license).

(i) Stations in different broadcast services which are under common control may request that their call signs be conformed by the assignment of the same basic call sign if that call sign is not being used by a non-commonly owned station. For the purposes of this paragraph, 50% or greater common ownership shall constitute a prima facie showing of common control.

(j) The provisions of this section shall not apply to International broadcast stations, to stations authorized under part 74 of the rules, nor to FM or TV stations seeking to modify an existing call sign only to the extent of adding or deleting an "-FM" or "-TV" suffix. The latter additions and deletions may be effective upon notification to the Commission.

(k) Unless subject to a pending transfer or assignment application, a change in call sign assignment will be made effective on the date specified in the telegram authorizing the change. In this regard, the applicant may include with its application a request for a specific effective date to take place within 45 days of the submission of its application for a call sign. Postponement of the effective date will be granted only in response to a timely request and for only the most compelling reasons.

(l) Four-letter combinations commencing with "W" or "K" which are assigned as call signs to ships or to other radio services are not available for assignment to broadcast stations, with or without the "-FM" or "-TV" suffix.

(m) Users of nonlicensed, low-power devices operating under Part 15 of the FCC rules may use whatever identification is currently desired, so long as propriety is observed and no confusion results with a station for which the FCC issues a license.

(n) Where a requested call sign, without the "-FM" or "-TV" suffix, would conform to the call sign of any other non-commonly owned station(s) operating in a different service, the applicant must obtain and submit with the application for the call sign the written consent of the licensee(s) of such station(s).

[48 FR 57136, Dec. 28, 1983, as amended at 52 FR 5295, Feb. 20, 1987; 52 FR 43079, Nov. 9, 1987]

§ 73.3555 Multiple ownership.

(a) No license for an AM, FM, or TV broadcast station shall be granted to any party (including all parties under common control) if such party directly or indirecly owns, operates, or controls one or more broadcast stations in the same service and the grant of such license will result in:

(1) Any overlap of the predicted or measured 5 mV/m groundwave contours of the existing and proposed AM stations, computed in accordance with § 73.183 or § 73.186; or

(2) Any overlap of the predicted 3.16 mV/m contours of the existing and proposed FM stations, computed in accordance with § 73.313; or

(3) Any overlap of the Grade B contours of the existing and proposed TV stations, computed in accordance with § 73.684.

(b) No license for an AM, FM, or TV broadcast station shall be granted to any party (including all parties under common control) if such party directly or indirectly owns, operates, or controls one or more such broadcast stations and the grant of such license will result in:

(1) The predicted or measured 2 mV/m groundwave contour of an existing or proposed AM station, computed in accordance with § 73.183 or § 73.186, encompassing the entire community of license of an existing or proposed TV broadcast station(s) or the Grade A contour(s) of the TV braodcast station(s), computed in accordance with § 73.684, encompassing the entire community of license of the AM station; or

(2) The predicted 1 mV/m contour of an existing or proposed FM station, computed in accordance with § 73.313, encompassing the entire community of license of an existing or proposed TV broadcast station(s) or the Grade A contour(s) of the TV broadcast station(s), computed in accordance with § 73.684, encompassing the entire community of license of the FM station.

(c) No license for an AM, FM, or TV broadcast station shall be granted to any party (including all parties under common control) if such party directly or indirectly owns, operates, or controls a daily newspaper and the grant of such license will result in:

(1) The predicted or measured 2 mV/m contour for an AM station, computed in accordance with § 73.183 or § 73.186, encompassing the entire community in which such newspaper is published; or

(2) The predicted 1 mV/m contour for an FM station, computed in accordance with § 73.313, encompassing the entire community in which such newspaper is published; or

(3) The Grade A contour for a TV station, computed in accordance with § 73.684, encompassing the entire community in which such newspaper is published.

(d)(1) No license for a commercial AM, FM or TV broadcast station shall be granted, transferred or assigned to any party (including all parties under common control) if the grant, transfer or assignment of such license would result in such party or any of its stockholders, partners, members, officers or directors, directly or indirectly, owning, operating or controlling, or having a cognizable interest in, either:

(i) More than fourteen (14) stations in the same service, or

(ii) More than twelve (12) stations in the same service which are not minority-controlled.

(2) No license for a commercial TV broadcast station shall be granted, transferred or assigned to any party (including all parties under common control) if the grant, transfer or assignment of such license would result in such party or any of its stockholders, partners, members, officers or directors, directly or indirectly, owning, operating or controlling, or having a cognizable interest in, either:

(i) TV stations which have an aggregate national audience reach exceeding thirty (30) percent, or

(ii) TV stations which have an aggregate national audience reach exceeding twenty-five (25) percent and which are not minority-controlled.

(3) For purposes of this paragraph:

(i) "National audience reach" means the total number of television households in the Arbitron Area of Dominant Influence (ADI) markets in which the relevant stations are located divided by the total national television households as measured by ADI data at the time of a grant, transfer or assignment of a license. For purposes of making this calculation, UHF television stations shall be attributed with 50 percent of the television households in their ADI market. Where the relevant application forms require a showing with respect to audience reach and the application relates to an area where Arbitron ADI market data are unavailable, then the applicant shall make a showing as to the number of television households in its market. Upon such a showing, the Commission shall make a determination as to the appropriate audience reach to be attributed to the applicant.

(ii) "TV broadcast station" or "TV station" exclude stations which are primarily satellite operations.

(iii) "Minority-controlled" means more than 50 percent owned by one or more members of a minority group.

(iv) "Minority" means Black, Hispanic, American Indian, Alaska Native, Asian and Pacific Islander.

(e) No renewal of license shall be granted for a term extending beyond January 1, 1980, to any party that as of January 1, 1975, directly or indirectly owns, operates or controls the only daily newspaper published in a community and also as of January 1, 1975, directly or indirectly owns, operates or controls the only commercial aural station or stations encompassing the entire community with a city-grade signal during daytime hours (predicted or measured signal for AM, predicted for FM), or the only commercial TV station encompassing the entire community with a city-grade signal. The provisions of this paragraph shall not require divestiture of any interest not in conformity with its provisions earlier than January 1, 1980. Divestiture is not required for aural stations if there is a separately owned, operated or controlled TV broadcast station licensed to serve the community.

(f) This section is not applicable to noncommercial educational FM and noncommercial educational TV stations.

NOTE 1: The word "control" as used herein is not limited to majority stock ownership, but includes actual working control in whatever manner exercised.

NOTE 2: In applying the provisions of this section, ownership and other interests in broadcast licensees, cable television systems and daily newspapers will be attributed to their holders and deemed cognizable pursuant to the following criteria:

(a) Except as otherwise provided herein, partnership and direct ownership interests and any voting stock interest amounting to 5% or more of the outstanding voting stock of a corporate broadcast licensee, cable television system or daily newspaper will be cognizable;

(b) No minority voting stock interest will be cognizable if there is a single holder of more than 50% of the outstanding voting stock of the corporate broadcast licensee, cable television system of daily newspaper in which the minority interest is held;

(c) Investment companies, as defined in 15 U.S.C. 80a-3, insurance companies and banks holding stock through their trust departments in trust accounts will be considered to have a cognizable interest only if they hold 10% or more of the outstanding voting stock of a corporate broadcast licensee, cable television system or daily newspaper, or if any of the officers or directors of the broadcast licensee, cable television system or daily newspaper are representatives of the investment company, insurance company or bank concerned. Holdings by a bank or insurance company will be aggregated if the bank or insurance company has any right to determine how the stock will be voted. Holdings by investment companies will be aggregated if under common management.

(d) Attribution of ownership interests in a broadcast licensee, cable television system or daily newspaper that are held indirectly by any party through one or more intervening corporations will be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting product, except that wherever the ownership percentage for any link in the chain exceeds 50%, it shall not be included for purposes of this multiplication. [For example, if A owns 10% of company X, which owns 60% of company Y, which owns 25% of "Licensee", then X's interest in "Licensee" would be 25% (the same as Y's interest since X's interest in Y exceeds 50%), and A's interest in "Licensee" would be 2.5% (0.1 x 0.25). Under the 5% attribution benchmark, X's interest in "Licensee" would be cognizable, while A's interest would not be cognizable.]

(e) Voting stock interests held in trust shall be attributed to any person who holds or shares the power to vote such stock, to any person who has the sole power to sell such stock, and to any person who has the right to revoke the trust at will or to replace the trustee at will. If the trustee has a familial, personal or extra-trust business relationship to the grantor or the beneficiary, the grantor or beneficiary, as appropriate, will be attributed with the stock interests held in trust. An otherwise qualified trust will be ineffective to insulate the grantor or beneficiary from attribution with the trust's assets unless all voting stock interests held by the grantor or beneficiary in the relevant broadcast licensee, cable television system or daily newspaper are subject to said trust.

(f) Holders of non-voting stock shall not be attributed an interest in the issuing entity. Holders of debt and instruments such as warrants, convertible debentures, options or other non-voting interests with rights of conversion to voting interests shall not be attributed unless and until conversion is effected.

(g)(1) A limited partnership interest shall be attributed to a limited partner unless that partner is not materially involved, directly or indirectly in the management or operation of the media-related activities of the partnership and the licensee or system so certifies.

(2) In order for a licensee or system to make the certification set forth in paragraph (a)(1) of this section, it must verify that the partnership agreement or certificate of limited partnership, with respect to the particular limited partner exempt from attribution, establishes that the exempt limited partner has no material involvement, directly or indirectly, in the management or operation of the media activities of the partnership. The criteria which would assure adequate insulation for purposes of this certification are described in the *Memorandum Opinion and Order* in MM Docket No. 83-46, FCC 85-252 (released June 24, 1985), as modified on reconsideration in the *Memorandum Opinion and Order* in MM Docket No. 83-46, FCC 86-410 (released November 28, 1986). Irrespective of the terms of the certificate of limited partnership or partnership agreement, however, no such certification shall be made if the individual or entity making the certification has actual knowledge of any material involvement of the limited partners in the management or operation of the media-related businesses of the partnership.

(h) Officers and directors of a broadcast licensee, cable television system or daily newspaper are considered to have a cognizable interest in the entity with which they are so associated. If any such entity engages in businesses in addition to its primary business of broadcasting, cable television service or newspaper publication, it may request the Commission to waive attribution for any officer or director whose duties and responsibilities are wholly unrelated to its primary business. The officers and directors of a parent company of a broadcast licensee, cable television system or daily newspaper, with an attributable interest in any such subsidiary entity, shall be deemed to have a cognizable interest in the subsidiary unless the duties and responsibilities of the officer or director involved are wholly unrelated to the broadcast licensee, cable television system or daily newspaper subsidiary, and a statement properly documenting this fact is submitted to the Commission. [This statement may be included on the appropriate Ownership Report]. The officers and directors of a sister corporation of a broadcast licensee, cable television system or daily newspaper shall not be attributed with ownership of these entities by virtue of such status.

(i) Discrete ownership interests will be aggregated in determining whether or not an interest is cognizable under this section. An individual or entity will be deemed to have a cognizable investment if:

(1) The sum of the interests held by or through "passive investors" is equal to or exceeds 10 percent; or

(2) the sum of the interests other than those held by or through "passive investors" is equal to or exceeds 5 percent; or

(3) the sum of the interests computed under paragraph (i)(1) of this section plus the sum of the interests computed under

paragraph (i)(2) of this section is equal to or exceeds 10 percent.

NOTE 3: In cases where record and beneficial ownership of voting stock is not identical (*e.g.*, bank nominees holding stock as record owners for the benefit of mutual funds, brokerage houses holding stock in street names for the benefit of customers, investment advisors holding stock in their own names for the benefit of clients, and insurance companies holding stock), the party having the right to determine how the stock will be voted will be considered to own it for purposes of these rules.

NOTE 4: Paragraphs (a) through (d) of this section will not be applied so as to require divestiture, by any licensee, of existing facilities, and will not apply to applications for increased power for Class IV stations, to applications for assignment of license or transfer of control filed in accordance with § 73.3540(f) or § 73.3541(b) of this part, or to applications for assignment of license or transfer of control to heirs or legatees by will or intestacy if no new or increased overlap would be created between commonly owned, operated, or controlled broadcast stations in the same service and if no new encompassment of communities proscribed in paragraphs (b) and (c) of this section as to commonly owned, operated, or controlled broadcast stations or daily newspapers would result. Said paragraphs will apply to all applications for new stations, to all other applications for assignment or transfer, and to all applications for major changes in existing stations except major changes that will result in overlap of contours of broadcast stations in the same service with each other no greater than already existing. (The resulting areas of overlap of contours of such broadcast stations with each other in such major change cases may consist partly or entirely of new terrain. However, if the population in the resulting overlap areas substantially exceeds that in the previously existing overlap areas, the Commission will not grant the application if it finds that to do so would be against the public interest, convenience, or necessity.) Commonly owned, operated, or controlled broadcast stations, with overlapping contours or with community-encompassing contours prohibited by this section may not be assigned or transferred to a single person, group, or entity, except as provided above in this note. If a commonly owned, operated, or controlled broadcast station and daily newspaper fall within the encompassing proscription of this section, the station may not be assigned to a single person, group or entity if the newspaper is being simultaneously sold to such single person, group or entity.

NOTE 5: Paragraphs (a) through (d) of this section will not be applied to cases involving television stations which are primarily "satellite" operations. Such cases will be considered on a case-by-case basis in order to determine whether common ownership, operation, or control of the stations in question would be in the public interest. Whether or not a particular television broadcast station which does not present a substantial amount of locally originated programming is primarily a "satellite" operation will be determined on the facts of the particular case. An authorized and operating "satellite" television station the Grade B contour of which overlaps that of a commonly owned, operated, or controlled "non-satellite" parent television broadcast station, or the Grade A contour of which completely encompasses the community of publication of a commonly owned, operated, or controlled daily newspaper, or the community of license of a commonly owned, operated, or controlled AM or FM broadcast station, or the community of license of which is completely encompassed by the 2 mV/m contour of such AM broadcast station or the 1 mV/m contour of such FM broadcast station may subsequently become a "non-satellite" station with local studios and locally originated programming. However, such commonly owned, operated, or controlled "non-satellite" television stations with Grade B overlap or such commonly owned, operated, or controlled "non-satellite" television stations and AM or FM stations with the aforementioned community encompassment, may not be transferred or assigned to a single person, group, or entity except as provided in Note 3. Nor shall any application for assignment or transfer concerning such "non-satellite" stations be granted if the assignment or transfer would be to the same person, group or entity to which the commonly owned, operated, or controlled newspaper is proposed to be transferred, except as provided in Note 3.

NOTE 6: For the purposes of this section a daily newspaper is one which is published four or more days per week, which is in the English language and which is circulated generally in the community of publication. A college newspaper is not considered as being circulated generally.

NOTE 7: The Commission will entertain requests to waive the restrictions of paragraph (b) of this section on a case-by-case basis. The Commission will look favorably upon waiver applications that meet either of the following two standards: (1) Those involving radio and television station combinations in the top 25 television markets where there will be at least 30 separately owned, operated and controlled broadcast licensees after the proposed combination, as determined by counting television licensees in the relevant ADI television market and radio licensees in the relevant television metropolitan market; (2) those involving "failed" broadcast stations that have not been operated for a substantial period of time, *e.g.*, four months, or that are involved in bankruptcy proceedings. For the purposes of determining the top 25 ADI television markets, the relevant ADI television market, and the relevant television metropolitan market for each prospective combination, we will use the most recent *Arbitron Ratings Television ADI Market Guide*. We will determine the number of radio stations in the relevant television metropolitan market and the number of television licensees within the relevant ADI television market based on the most recent Commmission ownership records.

Other waiver requests will be evaluated on a more rigorous case-by-case basis, as set forth in the *Second Report and Order* in MM Docket No. 87-7, FCC 88-407, released February 23, 1989, and *Memorandum Opinion and Order* in MM Docket No. 87-7, FCC 89-256, released August 4, 1989.

[49 FR 19496, May 8, 1984, as amended at 49 FR 19676, May 9, 1984; 49 FR 36504, Sept. 18, 1984; 50 FR 4676, Feb. 1, 1985; 50 FR 27449, July 3, 1985; 51 FR 18451, May 20, 1986; 52 FR 1632, Jan. 15, 1987; 53 FR 51781, Dec. 24, 1988; 54 FR 8335, Feb. 28, 1989; 54 FR 8745, Mar. 2, 1989; 54 FR 32640, Aug. 9, 1989]

§ 73.3561 Staff consideration of applications requiring Commission action.

Upon acceptance of an application, the complete file is reviewed by the staff and, except where the application is acted upon by the staff pursuant to delegation of authority, a report containing the recommendations of the staff and any other documents required is prepared and placed on the Commission's agenda.

[44 FR 38499, July 2, 1979]

§ 73.3562 Staff consideration of applications not requiring action by the Commission.

Those applications which do not require action by the Commission but which, pursuant to the delegations of authority set forth in subpart B of part 0, may be acted upon by the Chief, Mass Media Bureau, are forwarded to the Mass Media Bureau for necessary action. If the application is granted, the formal authorization is issued. In any case where it is recommended that the application be set for hearing, where a novel question of policy is presented, or where th Chief, Mass Media Bureau desires in structions from the Commission, th matter is placed on the Commissio agenda.

[49 FR 14509, Apr. 12, 1984]

§ 73.3564 Acceptance of applications.

(a) Applications tendered for filin are dated upon receipt and then for warded to the Mass Media Bureau where an administrative examinatio is made to ascertain whether the ap plications are complete. Except for lo power TV, TV translator, TV booste and non-reserved band FM (except fo Class D) applications, those found t be complete or substantially complet are accepted for filing and are give file numbers. In the case of minor de fects as to completeness, the applican will be required to supply the missin information. Applications that are no substantially complete will be re turned to the applicant. In the case o non-reserved band FM application those found to be substantially com plete at tender will be accepted fo tender and given file numbers. Non-re served band FM applications that ar not substantially complete will be re turned to the applicant. In the case o low power TV, TV translator and T booster applications, those found to b complete and sufficient will be accep ed for filing and given file number Low power TV, TV translator, and T booster applications that are not com plete and sufficient will be returned t the applicant.

(b) Acceptance of an application fo filing merely means that it has bee the subject of a preliminary review b the FCC's administrative staff as t completeness. Such acceptance wi not preclude the subsequent dismiss of the application if it is found to b patently not in accordance with th FCC's rules.

(c) At regular intervals, the FCC wi issue a Public Notice listing all appli cations and major amendments there to which have been accepted for filin except for low power TV, TV transl tor, TV booster, and non-reserve band FM stations. Pursuant t §§ 73.3571(c), 73.3572(c) and 73.3573(d such notice shall establish a cut-of date (not less than 30 days from the date of issuance) for the filing of mutually exclusive applications and petitions to deny. However, no application will be accepted for filing unless certification of compliance with the local notice requirements of § 73.3580(h) has been made in the tendered application.

(d) New and major change applications for non-reserved band FM stations (except for Class D stations) and for low power TV and TV translator stations will be accepted only on date(s) specified by the Commission. Low power TV and TV translator station filing period(s) will be designated by the Commission in a Public Notice. No more than five (5) applications for new low power TV or TV translator stations may be tendered for filing by any applicant, or by any individual or entity having an interest of one (1) percent or greater in any applicant(s) in a single filing period. This restriction does not apply to applications for major or minor changes in low power TV or TV translator stations as defined by § 73.3572. Non-reserved band FM facilities and major change applications will have filing dates designated by the Commission in the following manner:

(1) For all vacant non-reserved band FM allocations listed on the FM Table of Allotments, § 73.202, as of March 14, 1985, a one-time filing period or "window" will open for 30 days, beginning on the 31st day after the date of publication of the *Report and Order* in MM Docket No. 84-750 in the FEDERAL REGISTER and will close on the 60th day after such publication. (This filing window does not apply to the 689 FM channels added to the FM Table of Allotments by the Commission's decision in MM Docket No. 84-231).

(2) The 689 FM allocations added to the FM Table of Allotments by MM Docket 84-231 will be subject to a series of windows. The Audio Services Division of the Mass Media Bureau will establish, by Public Notice, the window filing dates for this group of allotments.

(3) Each *Report and Order* specifying a new non-reserved FM band allocation will identify the window filing period which will begin upon the effective date of that *Order* and continue for at least 30 days.

(4) Where no applications are tendered during a window filing period, applications may be tendered any time after the window closes. These applications will be processed on a "first come/first serve" basis and will be treated as simultaneously filed if filed on the same day. Any applications received after the filing of a lead applicant will be placed in a queue, according to filing date, behind the lead applicant.

(5) If a non-reserved band FM channel allotment is vacant after the grant of a construction permit becomes final, because of a lapsed construction permit or for any other reason, the FCC will, by Public Notice, announce a subsequent filing window for the acceptance of new applications for such channels.

(6) However, no application will be accepted for tender unless certification of compliance with the local notice requirements of § 73.3580(h) has been made in the tendered application.

[44 FR 38499, July 2, 1979, as amended at 50 FR 19943, May 13, 1985; 52 FR 7421, Mar. 11, 1987; 52 FR 31400, Aug. 20, 1987]

§ 73.3566 Defective applications.

(a) Applications which are determined to be patently not in accordance with the FCC rules, regulations, or other requirements, unless accompanied by an appropriate request for waiver, will be considered defective and will not be accepted for filing or if inadvertently accepted for filing will be dismissed. Requests for waiver shall show the nature of the waiver or exception desired and shall set forth the reasons in support thereof.

(b) If an applicant is requested by the FCC to file any additional documents or information not included in the prescribed application form, a failure to comply with such request will be deemed to render the application defective, and such application will be dismissed.

[44 FR 38499, July 2, 1979]

§ 73.3568 Dismissal of applications.

(a) Subject to the provisions of § 73.3523 (Dismissal of applications in renewal proceedings) and § 73.3525 (Agreements for removing application conflicts), any application may, upon request of the applicant be dismissed without prejudice as a matter of right prior to the designation of such application for hearing. An applicant's request for the return of an application that has been accepted for filing will be regarded as a request for dismissal.

(b) Failure to prosecute an application, or failure to respond to official correspondence or request for additional information, will be cause for dismissal. Subject to the provisions of § 73.3525, such dismissal will be without prejudice where an application has not yet been designated for hearing, but may be made with prejudice after designation for hearing.

(c) Subject to the provisions of § 73.3523 (Dismissal of applications in renewal proceedings) and § 73.3525 (Agreements for removing application conflicts), requests to dismiss an application without prejudice after it has been designated for hearing will be considered only upon written petition properly served upon all parties of record. Such requests shall be granted only upon a showing that the request is based on circumstances wholly beyond the applicant's control which preclude further prosecution of his application.

[44 FR 38499, July 2, 1979, as amended at 54 FR 22599, May 25, 1989]

§ 73.3570 AM broadcast station applications affected by international agreements.

(a) Except as provided in paragraph (b) of this section, no application for an AM station will be accepted for filing if authorization of the facilities requested would be inconsistent with international commitments of the United States under treaties and other international agreements, arrangements and understandings. (See list of such international instruments in § 73.1650(b).) Any such application that is inadvertently accepted for filing will be dismissed.

(b) AM applications that involve conflicts only with the North American Regional Broadcasting Agreement (NARBA), but that are in conformity with the remaining treaties and other international agreements listed in § 73.1650(b) and with the other requirements of this part 73, will be granted subject to such modifications as the FCC may subsequently find appropriate, taking international considerations into account.

(c) *Amendment of application designated for hearing.* When, in the case of any application which has been designated for hearing on issues not including an issue as to consistency with international relationships and as to which no final decision has been rendered, action under this section becomes appropriate because of inconsistency with international relationships, the applicant involved shall, notwithstanding the provisions of §§ 73.3522 and 73.2571, be permitted to amend its application to achieve consistency with such relationships. In such cases the provisions of § 73.3605(c) will apply.

(d) In some circumstances, special international considerations may require that the FCC, in acting on applications, follow procedures different from those established for general use. In such cases, affected applicants will be informed of the procedures to be followed.

[44 FR 38500, July 2, 1979, as amended at 51 FR 32089, Sept. 9, 1986; 54 FR 39737, Sept. 28, 1989]

§ 73.3571 Processing of AM broadcast station applications.

(a) Applications for AM broadcast facilities are divided into two groups.

(1) In the first group are applications for new stations or for major changes in the facilities of authorized stations. A major change is any increase in power (except for Class IV stations on local channels), or any change in frequency, hours of operation, or station location. However, the FCC may, within 15 days after the acceptance for filing of any other application for modification of facilities, advise the applicant that such application is considered to be one for a

major change and therefore is subject to the provisions of §§ 73.3580 and 1.1111 pertaining to major changes.

(2) The second group consists of applications for licenses and all other changes in the facilities of authorized stations.

(b) If an application is amended so as to effect a major change as defined in paragraph (a)(1) of this section or so as to result in a situation where the original party or parties to the application do not retain more than 50% ownership interest in the application as originally filed, § 73.3580 will apply to such amended application.

(c) Applications for new stations or for major changes in the facilities of authorized stations are processed as nearly as possible in the order in which they are filed. Such applications will be placed in the processing line in numerical sequence, and are drawn by the staff for study, the lowest file number first. Thus, the file number determines the order in which the staff's work is begun on a particular application or group of conflicting applications. In order that those applications which are entitled to be grouped for processing may be fixed prior to the time processing of the earliest filed application is begun, the FCC will periodically release a Public Notice listing applications which have been accepted for filing and announcing a date (not less than 30 days after release) on which the listed applications will be considered available and ready for processing and by which all mutually exclusive applications and/or petitions to deny the listed applications must be filed.

(d) Applications proposing to increase the power of an AM station are subject to the following requirements:

(1) In order to be acceptable for filing, any application which does not involve a change in site and which is filed before June 3, 1988, must propose at least a 50% increase in the station's nominal power. However, applications proposing at least a 20% increase and which are in conflict with an application proposing a 50% increase are acceptable for filing.

(2) In order to be acceptable for filing, any application which does not involve a change in site and which is filed on or after June 3, 1988, must propose at least a 20% increase in the station's nominal power.

(3) Applications involving a change in site are not subject to the requirements in paragraphs (d) (1) or (2) of this section and may include a request for an increase in power of any amount.

(4) Special procedures apply to the 14 frequencies listed in § 73.25(c). The same procedures will be applied to each of the three frequencies or group of frequencies which are included in the above category. There are three stages to these procedures. In the first Stage, each Class II-D station will receive an Order to Show Cause why its license should not be modified to specify operation at night with the power calculated by the Commission and as shown on said Order. Stations accepting this modification will be redesignated as Class II-C if the nighttime power is 0.25 kW or more or as Class II-S if that power is below 0.25 kW. During Stage two, stations in both groups will be given five years within which to file an application to increase this power to a maximum of 0.5 kW or their daytime power, whichever is lower. During the entire period, applications for new Class II-C stations with power up to a maximum of 0.5 kW also can be filed and will be granted without regard to the nighttime interference caused to other Class II-C or the Class II-S stations, but new Class II-C stations will be required to protect foreign and domestic Class II-B full-time stations on these frequencies. In addition, after two years of the five-year period have elapsed, applications for major changes proposing to change channel to one of these frequencies will be accepted for filing. Such applications must meet all requirements and limitations applicable to Class II-C stations and will not receive nighttime protection until expiration of the five-year period. Finally, in Stage three, which occurs when the five-year period above comes to an end, Class II-C and II-S stations will be able to file applications to increase their nighttime power to 1 kW or their daytime power, whichever is lower. Applications for new Class II-C stations can

also be filed specifying a maximum nighttime power of 1 kW. However, any application in either category must protect existing Class II-C stations (including Class II-S stations that increased power during Stage two and were redesignated as Class II-C during this period). The five-year periods of Stage two applicable to the three groups of frequencies are set forth below:

(i) 690 kHz, 740 kHz, 860kHz, 990kHz, 1010kHz, and 1580kHz: Stage 2 begins on June 3, 1985 and ends on May 31, 1990; Stage 3 begins on June 1, 1990.

(ii) 1540 kHz [to be established]

(iii) 540 kHz, 730 kHz, 800 kHz, 900 kHz, 1050 kHz, 1220 kHz, and 1570 kHz,: Stage 2 begins on August 28, 1986 and ends on August 27, 1991; Stage 3 begins on August 28, 1991.

(5) The following special procedures will be followed in authorizing Class II-D daytime-only stations on 940 and 1550 kHz, and Class III daytime-only stations on the 41 regional channels listed in § 73.26(a), to operate unlimited-time.

(i) Each eligible daytime-only station in the foregoing categories will receive an Order to Show Cause why its license should not be modified to specify operation during nighttime hours with the facilities it is licensed to start using at local sunrise, using the power stated in the Order to Show Cause, that the Commission finds is the highest nighttime level—not exceeding 0.5 kW—at which the station could operate without causing prohibited interference to other domestic or foreign stations, or to co-channel or adjacent channel stations for which pending applications were filed before December 1, 1987.

(ii) Stations accepting such modification shall be reclassified. Those authorized in such Show Cause Orders to operate during nighttime hours with a power of 0.25 kW or more, or with a power that, although less than 0.25 kW, is sufficient to enable them to attain RMS field strengths of 141 mV/m or more at 1 kilometer, shall be redesignated as Class II-B stations if they are assigned to 940 or 1550 kHz, and as unlimited-time Class III stations if they are assigned to regional channels.

(iii) Stations accepting such modification that are authorized to operate during nighttime hours at powers less than 0.25 kW, and that cannot with such powers attain RMS field strengths of 141 mV/m or more at 1 kilometer, shall be redesignated as Class II-S stations if they are assigned to 940 or 1550 kHz, and as Class III-S stations if they are assigned to regional channels.

(iv) Applications for new stations may be filed at any time on 940 and 1550 kHz and on the regional channels. Also, stations assigned to 940 or 1550 kHz, or to the regional channels, may at any time, regardless of their classifications, apply for power increases up to the maximum generally permitted. Such applications for new or changed facilities will be granted without taking into account interference caused to Class II-S or Class III-S stations, but will be required to show interference protection to other classes of stations, including stations that were previously classified as Class II-S or Class III-S, but were later reclassified as Class II-B or Class III unlimited-time stations as a result of subsequent facilities modifications that permitted power increases qualifying them to discountinue their "S" subclassification.

(e) The processing and consideration of applications for new stations or major changes on those frequencies specified in § 73.3569 are subject to certain restrictions, as set forth therein.

(f) Applications other than those for new stations or for major changes in the facilities of authorized stations are not placed on the processing line but are processed as nearly as possible in the order in which they are filed.

(g) Applications for change of license to change hours of operation of a Class IV station, to decrease hours of operation of any other class of station, or to change station location involving no change in transmitter site will be considered without reference to the processing line.

(h) If, upon examination, the FCC finds that the public interest, convenience and necessity will be served by the granting of an application, the same will be granted. If the FCC is unable to make such a finding and it appears that a hearing may be required, the procedure set forth in § 73.3593 will be followed.

(i) When an application which has been designated for hearing has been removed from the hearing docket, the application will be returned to its proper position (as determined by the file number) in the processing line. Whether or not a new file number will be assigned will be determined pursuant to paragraph (j) of this section, after the application has been removed from the hearing docket.

(j)(1) A new file number will be assigned to an application for a new station, or for major changes in the facilities of an authorized station, when it is amended to change frequency, to increase power, to increase hours of operation, or to change station location. Any other amendment modifying the engineering proposal, except an amendment respecting the type of equipment specified, will also result in the assignment of a new file number unless such amendment is accompanied by a complete engineering study showing that the amendment would not involve new or increased interference problems with existing stations or other applications pending at the time the amendment is filed. If, after submission and acceptance of such an engineering amendment, subsequent examination indicates new or increased interference problems with either existing stations or other applications pending at the time the amendment was received at the FCC, the application will then be assigned a new file number and placed in the processing line according to the numerical sequence of the new file number.

(2) A new file number will be assigned where an application for a new station is amended (whether by a single amendment or by a series of amendments) so as to result in a situation where the original party or parties to the application do not retain more than 50% ownership interest in the application as originally filed, and § 73.3580 will apply to such amended application.

(3) Where an amendment to an application would require a new file number pursuant to paragraph (j)(1) or (j)(2) of this section, the applicant will have an opportunity to withdraw the amendment at any time prior to designation for a hearing if applicable; and may be afforded, subject to the discretion of the Administrative Law Judge, an opportunity to withdraw the amendment after designation for a hearing.

(4) An application for changes in the facilities of an existing station will continue to carry the same file number even though (pursuant to FCC approval) an assignment of license or transfer of control of said licensee or permittee has taken place if, upon consummation, the application is amended to reflect the new ownership.

(k) When an application is reached for processing, and it is necessary to address a letter to the applicant asking further information, the application will not be processed until the information requested is received, and the application will be placed in the pending file to await the applicant's response.

(l) When an application is placed in the pending file, the applicant will be notified of the reason for such action.

[44 FR 38501, July 2, 1979; 44 FR 40311, July 10, 1979, as amended at 46 FR 36852, July 16, 1981; 49 FR 14745, Apr. 13, 1984; 49 FR 32589, Aug. 15, 1984; 49 FR 48187, Dec. 11, 1984; 50 FR 18848, May 2, 1985; 50 FR 24522, June 11, 1985; 52 FR 21311, June 5, 1987; 53 FR 1032, Jan. 15, 1988; 54 FR 39534, Sept. 27, 1989; 55 FR 19265, May 9, 1990]

§ 73.3572 Processing of TV broadcast, low power TV, TV translator and TV booster station applications.

(a) Applications for TV stations are divided into two groups:

(1) In the first group are applications for new stations or major changes in the facilities of authorized stations. A major change for TV broadcast stations authorized under this part is any change in frequency or community of license which is in accord with a present allotment contained in the Table of Allotments (§ 73.606). Other requests for change in frequency or community of license for TV broadcast stations must first be

submitted in the form of a petition for rulemaking to amend the Table of Allotments. In the case of low power TV, TV translator, and TV booster stations authorized under Part 74 of this chapter, a major change is any change in:

(i) Frequency (output channel) assignment (does not apply to TV boosters);

(ii) Transmitting antenna system including the direction of the radiation, directive antenna pattern or transmission line;

(iii) Antenna height;

(iv) Antenna location exceeding 200 meters; or

(v) Authorized operating power.

(2) However, if the proposed modification of facilities, other than a change in frequency, will not increase the signal range of the low power TV, TV translator or TV booster station in any horizontal direction, the modification will not be considered a major change. Provided, that in the case of an authorized low power TV, TV translator or TV booster station which is predicted to cause or receive interference to or from an authorized TV broadcast station pursuant to § 74.705 or interferes with broadcast or other services under § 74.703 or § 74.709, that an application for a change in output channel, together with technical modifications which are necessary to avoid interference (including a change in antenna location of less than 16.1 km), will not be considered as an application for a major change in those facilities. Provided further, that the FCC may, within 15 days after the acceptance of any other application for modification of facilities, advise the applicant that such application is considered to be one for a major change and therefore subject to the provisions of §§ 73.3580 and 1.1111 pertaining to major changes.

(b) A new file number will be assigned to an application for a new station or for major changes in the facilities of an authorized station, when it is amended so as to effect a major change, as defined in paragraph (a)(1) of this section, or result in a situation where the original party or parties to the application do not retain more than 50% ownership interest in the application as originally filed and § 73.3580 will apply to such amended application. An application for change in the facilities of any existing station will continue to carry the same file number even though (pursuant to FCC approval) an assignment of license or transfer of control of such licensee or permittee has taken place if, upon consummation, the application is amended to reflect the new ownership.

(c) Where an amendment to an application would require a new file number pursuant to paragraph (b) of this section, the applicant will have the opportunity to withdraw the amendment at any time prior to designation for a hearing if applicable; and may be afforded, subject to the discretion of the Administrative Law Judge, an opportunity to withdraw the amendment after designation for a hearing.

(d) Applications for TV stations, other than low power TV, TV translator and TV booster stations, will be processed as nearly as possible in the order in which they are filed. Such applications will be placed in the processing line in numerical sequence, and will be drawn by the staff for study, the lowest file number first. In order that those applications which are entitled to be grouped for processing may be fixed prior to the time processing of the earliest filed application is begun, the FCC will periodically release a Public Notice listing applications which have been accepted for filing and announcing a date (not less than 30 days after issuance) on which the listed applications will be considered available and ready for processing and by which all mutually exclusive applications and petitions to deny the listed applications must be filed.

(e) Except for applications for low power TV, TV translator and TV booster stations, regardless of the number of applications filed for channels in a city or the number of assignments available in that city, those applications which are mutually exclusive, i.e., which request the same channel, will be designated for hearing. All other applications for channels will, if the applicants are duly qualified, receive grants. For example, if channels 6, 13, 47 and 53 have been assigned to City X and there are pending two applications for Channel 6 and one application for each of the remaining channels, the latter three applications will be considered grants without hearing and the two mutually exclusive applications requesting Channel 6 will be designated for hearing. If there are two pending applications for Channel 6 and two applications for Channel 13, separate hearings will be held.

(f) Where applications, other than applications for low power TV, TV translator, and TV booster stations, are mutually exclusive because the distance between the respective proposed transmitter sites is contrary to the station separation requirements set forth in § 73.610, such applications will be processed and designated for hearing at the time the application with the lower file number is reached for processing. In order to be considered mutually exclusive with a lower file number application, the higher file number application must have been accepted for filing at least one day before the lower file number application has been acted upon by the FCC.

(g) *Processing of applications for low power TV and TV translator stations.* (1) Applications for low power TV and TV translator stations will be processed as nearly as possible in the order in which they are filed. Such applications will be placed in the processing line in numerical sequence, and will be drawn by the staff for study, the lowest file number first. The FCC will specify, by Public Notice, a period for filing low power TV or TV translator applications. The filing period will open no less than 30 days after release of the Public Notice and remain open for an least five work days.

(2) Subsequently, the FCC will release a Public Notice: (i) Establishing a date, time, and place for a public lottery; (ii) accepting for filing mutually exclusive applications which were timely filed during the filing period previously specified by the FCC; (iii) designating the listed mutually exclusive applications for public lottery pursuant to the procedures set forth in § 1.1601 *et seq.;* and (iv) describing each applicant's certified perferences and selection probabilities and assigning to each applicant a number block. (It will be the applicant's responsibility to notify the FCC, within 30 days of the release of the Public Notice, or any omissions of applications or clerical or mathematical errors in preferences or probabilities. The FCC will not entertain appeals involving these matters if timely notification to the FCC has not been made.) If necessary, the FCC will release subsequent Public Notices correcting only clerical or mathematical errors and including any previously omitted mutually exclusive applications. The public lottery pursuant to the procedures set forth in § 1.1601 *et seq.,* will be held no less than 30 days subsequent to the initially released Public Notice announcing the lottery. Subsequent to the lottery, the FCC will release a Public Notice announcing the selection of a tentative selectee resulting from the lottery and providing and opportunity for the filing of Petitions to Deny pursuant to the requirements of § 73.3584(c). If, upon examination, the FCC finds that the public interest, convenience and necessity will be served by the granting of a tentative selectee's application, the same will be granted. Those applications which, due to the lottery, are no longer mutually exclusive with other applications will be announced in a Public Notice proposing the grant of those applications and providing an opportunity for the filing of Petitions to Deny pursuant to § 73.3584(c). Groups of mutually exclusive applicants remaining after a lottery will be designated for lottery. Applications which are are not grantable due to mutual exclusivity with the permittee selected by lottery will be dismissed.

(3) If, upon examination, the FCC is unable to find that the public interest, convenience and necessity will be served by the granting of a lottery tentative selectee's applications, and it appears that a hearing may be required, the procedure set forth in § 73.3593 will be followed. No further action will be taken with reference to the other applications in the lottery group from which the tentative selectee was selected until the tentative selectee's qualifications to be a permittee are resolved. If the tentative selectee is ultimately found to be unqualified to be a permittee, the procedure set forth in

paragraph (f)(2) of this section will be followed.

(4) The FCC will periodically release a Public Notice accepting for filing and proposing for grant those applications which were timely filed during the filing period specified by the FCC in a Public Notice for filing low power TV or TV translator applications, but which are not mutually exclusive with any other application, and providing an opportunity for the filing of Petitions to Deny pursuant to § 73.3584.

NOTE 1: Notwithstanding paragraph (f)(1) and § 73.3522(a)(3), applications for low power TV and TV translator stations will be processed within the tiered processing framework as set forth in *Notice on Interim Processing*, 45 FR 62004 (published September 17, 1980), *Order Imposing Freeze*, 46 FR 26062 (published May 11, 1981), and *Report and Order in the Matter of Inquiry Into the Future Role of Low Power Television Broadcasting and Television Translators in the National Telecommunications System*, 47 FR 21468 (published May 18, 1982).

NOTE 2: Pursuant to § 73.3584(c), the Commission may announce, by the Public Notice designating the applications for public lottery, that a Notice of Petition to Deny will be required to be filed no later than 30 days after issuance of the Public Notice.

(5) TV booster station applications may be filed at any time and will be subject to the following procedures:

(i) Subsequent to filing, the FCC will release a Public Notice accepting for filing and proposing for grant those applications which are not mutually exclusive with any other TV translator, low power TV, or TV booster application, and providing for the filing of Petitions To Deny pursuant to § 73.3584;

(ii) Any application received during the filing period for TV translator, low power TV, or TV booster applications with which it is mutually exclusive will be included in the relevant public lottery pursuant to § 1.1601 *et seq.*; and

(iii) Applications received after the filing date for applications with which it is mutually exclusive will be dismissed as an untimely filing.

[44 FR 38502, July 2, 1979, as amended at 48 FR 27205, June 13, 1983; 48 FR 34039, July 27, 1983; 49 FR 47843, Dec. 7, 1984; 52 FR 31400, Aug. 20, 1987; 55 FR 19265, May 9, 1990]

§ 73.3573 Processing FM broadcast and FM translator station applications.

(a) Applications for FM broadcast stations are divided into two groups:

(1) In the first group are applications for new stations or for major changes in the facilities of authorized stations. A major change for FM station authorized under this part is any change in frequency or community of license which is in accord with a present allotment contained in the Table of Allotments (§ 73.202(b)). Other requests for change in frequency or community of license for FM stations must first be submitted in the form of a petition for rule making to amend the Table of Allotments. In the case of FM translator stations authorized under part 74, it is any change in frequency (output channel), or authorized principal community or area. For noncommercial educational FM stations, a major change is any change in frequency or community of license or any change in power or antenna location or height above average terrain (or combination thereof) which would result in a change of 50% or more in the area within the station's predicted 1 mV/m field strength contour. (A change in area is defined as the sum of the area gained and the area lost as a percentage of the original area). However, the FCC may within 15 days after the acceptance of any other application for modification of facilities, advise the applicant that such application is considered to be one for a major change and therefore subject to the provisions of §§ 73.3580 and 1.1111 pertaining to major changes. Proposal to upgrade the class of an FM broadcast station must first be submitted as petitions for rule making to amend the Table of Allotments. After the initial filing window closes for a vacant FM allotment, an applicant may propose a downgraded class in an application for a new FM broadcast station. A licensee or permittee may seek the downgrading in class of its existing FM broadcast station by filing a minor change application.

(2) The second group consists of applications for licenses and all other changes in the facilities of authorized stations.

(b) A new file number will be assigned to an application for a new station or for major changes in the facilities of an authorized station, when it is amended so as to effect a major change, as defined in paragraph (a)(1) of this section, or result in a situation where the original party or parties to the application do not retain more than 50% ownership interest in the application as originally filed, and § 73.3580 will apply to such amended application. An application for changes in the facilities of any existing station will continue to carry the same file number even though (pursuant to FCC approval) an assignment of license or transfer of control of such licensee or permittee has taken place if, upon consummation, the application is amended to reflect the new ownership.

(c) Where an amendment to an application would require a new file pursuant to paragraph (b) of this section, the applicant will have the opportunity to withdraw the amendment at any time prior to designation for a hearing if applicable; and may be afforded, subject to the discretion of the Administrative Law Judge, an opportunity to withdraw the amendment after designation for a hearing.

(d) If, upon examination, the FCC finds that the public interest, convenience and necessity will be served by the granting of an application for FM broadcast facilities, the same will be granted. If the FCC is unable to make such a finding and it appears that a hearing may be required, the procedure given in § 73.3593 will be followed.

(e) Applications for reserved band and Class D FM broadcast stations will be processed as nearly as possible in the order in which they are filed. Such applications will be placed in the processing line in numerical sequence, and will be drawn by the staff for study, the lowest file number first. In order that those applications which are entitled to be grouped for processing may be fixed prior to the time processing of the earliest filed application is begun, the FCC will periodically release a Public Notice listing applications which have been accepted for filing and announcing a date (not less than 30 days after publication) on which the listed applications will be considered available and ready for processing and by which all mutually exclusive applications and/or petitions to deny the listed applications must be filed.

(f) Where reserved band plus Class D applications are mutually exclusive because the distance between their respective proposed transmitter sites is contrary to the station separation requirements set forth in § 73.507, such applications will be processed and designated for hearing at the time the application with the lower file number is reached for processing. In order to be considered mutually exclusive with a lower file number application, the higher file number application must have been accepted for filing at least one day before the lower file number application has been acted upon by the FCC.

(g) Processing non-reserved FM broadcast station applications.

(1) Applications for non-reserved FM broadcast stations will be processed as nearly as possible in the order in which they are tendered. Such applications will be placed in the processing line in numerical sequence, and will be drawn by the staff for study, the lowest file number first. The FCC will specify, pursuant to § 73.3564(d), the filing periods for non-reserved band FM applications.

(2) All applications received during the appropriate filing period or "window" which are found to be mutually exclusive will be designated for hearing. All other applications will, if the applicants are duly qualified, receive grants. The FCC will periodically release a Public Notice listing applications pending hearings or grant and announcing a date (not less than 30 days after issuance) by which petitions to deny must be filed.

(3) If, after the close of the appropriate window filing period, a non-reserved FM allotment remains vacant, processing for that channel will be on a "first come/first serve" basis with the first acceptable application cutting off the filing rights of subsequent applicants. All applications received on the same day will be treated as simultaneously tendered and, if they are

found to be mutually exclusive, will be designated for hearing. Applications received after the tender of a lead application will be grouped, according to filing date, behind the lead application in a queue. The priority rights of the lead applicant, as against all other applicants, are determined by the date of filing but the filing date for subsequent applicants for that channel and community only reserves a place in the queue. The rights of an applicant in a queue ripen only upon a final determination that the lead applicant is unacceptable and if the queue member is reached and found acceptable. The queue will remain behind the lead applicant until a construction permit is finally granted, at which time the queue dissolves. If there is no queue or if no queue member is found acceptable, that allotment remains subject to "first come/first serve" processing. The FCC will periodically release a Public Notice listing those pending hearings or grant and announcing a date (not less than 30 days after issuance) by which petitions to deny must be filed.

(h) Resolving processing conflicts between the reserved and non-reserved bands. The reserved bands include Class D stations.

(1) Reserved band applicants, applying for a channel on the non-reserved band are subject to the processing procedures in paragraph (f).

(2) If a reserved band applicant has generated a cut-off list that overlaps a non-reserved band window filing period, the non-reserved band applicant must file within the cut-off if he seeks mutually exclusive status with the reserved band applicant.

(3) Following the close of a non-reserved band application filing window, the non-reserved band applicant is subject to the "first come/first serve" rules and would lose to a pre-filed reserved band applicant.

NOTE: Processing of applications for new low power educational FM applications:

Pending the Commission's restudy of the impact of the rule changes pertaining to the allocations of 10-watt and other low power noncommercial educational FM stations, applications for such new stations, or major changes in existing ones, will not be accepted for filing. Exceptions are: (1) In Alaska, applications for new Class D stations or major changes in existing ones are acceptable for filing: and (2) applications for existing Class D stations to change frequency are acceptable for filing. In (2), upon the grant of such application, the station shall become a Class D (secondary) station. (See First Report and Order, Docket 20735, FCC 78-386, 43 FR 25821, and Second Report and Order, Docket 20735, FCC 78-384, 43 FR 39704.) Effective date of this FCC imposed "freeze" was June 15, 1978. Applications which specify facilities of at least 100 watts effective radiated power will be accepted for filing.

[44 FR 38503, July 2, 1979, as amended at 48 FR 29510, June 27, 1983; 49 FR 32589, Aug. 15, 1984; 50 FR 19943, May 13, 1985; 54 FR 11954, Mar. 23, 1989; 55 FR 19265, May 9, 1990]

§ 73.3574 Processing of international broadcast station applications.

(a) Applications for International station facilities are divided into two groups.

(1) In the first group are applications for new stations, or for major changes in the facilities of authorized stations. A major change is any change in or addition to authorized zones or areas of reception, any change in transmitter location other than one in the immediate vicinity of existing antennas of the station, or any change in power, or antenna directivity. However, the FCC may, within 15 days after the acceptance for filing of any other application for modification, advise the applicant that such application is considered to be one for a major change and therefore is subject to §§ 1.1111 and 73.3580 pertaining to major changes.

(2) The second group consists of applications for licenses and all other changes in the facilities of authorized stations.

(b) If an application is amended so as to effect a major change as defined in paragraph (a)(1) of this section, or so as to result in an assignment or transfer of control which, in the case of an authorized station, would require the filing of an application therefor on FCC Form 314 or 315 (see § 73.3540), § 73.3580 will apply to such amended application.

(c) Applications for International stations will be processed as nearly as possible in the order in which they are filed.

[44 FR 38504, July 2, 1979]

§ 73.3578 Amendments to applications for renewal, assignment or transfer of control.

(a) Any amendments to an application for renewal of any instrument of authorization shall be considered to be a minor amendment. However, the FCC may, within 15 days after tender for filing of any amendment, advise the applicant that the amendment is considered to be a major amendment and therefore is subject to the provisions of § 73.3580.

(b) Any amendment to an application for assignment of construction permit or license, or consent to the transfer of control of a corporation holding such a construction permit or license, shall be considered to be a minor amendment, except that any amendment which seeks a change in the ownership interest of the proposed assignee or transferee which would result in a change in control, or any amendment which would require the filing of FCC Forms 314, 315, or 345 (see § 73.3540), if the changes sought were made in an original application for assignment or transfer of control, shall be considered to be a major amendment. However, the FCC may, within 15 days after the acceptance for filing of any other amendment, advise the applicant that the amendment is considered to be a major amendment and therefore is subject to the provisions of § 73.3580.

[44 FR 38504, July 2, 1979, as amended at 51 FR 18451, May 20, 1986]

§ 73.3580 Local public notice of filing of broadcast applications.

(a) All applications for instruments of authorization in the broadcast service (and major amendments thereto, as indicated in §§ 73.3571, 73.3572, 73.3573, 73.3574 and 73.3578) are subject to the local public notice provisions of this section, except applications for:

(1) A minor change in the facilities of an authorized station, as indicated in §§ 73.3571, 73.3572, 73.3573 and 73.3574.

(2) Consent to an involuntary assignment or transfer or to a voluntary assignment or transfer which does not result in a change of control and which may be applied for on FCC Form 316 pursuant to the provisions of § 73.3540(b).

(3) A license under section 319(c) of the Communications Act or, pending application for or grant of such license, any special or temporary authorization to permit interim operation to facilitate completion of authorized construction or to provide substantially the same service as would be authorized by such license.

(4) Extension of time to complete construction of authorized facilities.

(5) An authorization of facilities for remote pickup or studio links for use in the operation of a broadcast station.

(6) Authorization pursuant to section 325(b) of the Communications Act ("* * * studios of foreign stations") where the programs to be transmitted are special events not of a continuing nature.

(7) An authorization under any of the proviso clauses of section 308(a) of the Communications Act concerning applications for and conditions in licenses.

(b) Applications (as originally filed or amended) will be acted upon by the FCC no sooner than 30 days following public notice of acceptance for filing or amendment, except as otherwise permitted in § 73.3542, "Application for temporary authorization."

(c) An applicant who files an application or amendment thereto which is subject to the provisions of this section, must give a notice of this filing in a newspaper. Exceptions to this requirement are applications for renewal of AM, FM, TV and International broadcasting stations; low power TV stations; TV and FM translator stations, TV booster stations; FM booster stations; and applications subject to paragraph (e) of this section. The local public notice must be completed within 30 days of the tendering of the application. In the event the FCC notifies the applicant that a major change is involved, requiring the applicant to file public notice pursuant to §§ 73.3571, 73.3572, 73.3573 or 73.3578, this filing notice shall be given in a newspaper following this notification.

(1) *Notice requirements for these applicants are as follows.* (i) In a daily newspaper of general circulation published in the community in which the station is located, or proposed to be located, at least twice a week for two consecutive weeks in a three-week period; or,

(ii) If there is no such daily newspaper, in a weekly newspaper of general circulation published in that community, once a week for 3 consecutive weeks in a 4-week period; or,

(iii) If there is no daily or weekly newspaper published in that community, in the daily newspaper from wherever published, which has the greatest general circulation in that community, twice a week for 2 consecutive weeks within a 3-week period.

(2) *Notice requirements for applicants for a permit pursuant to section 325(b) of the Communications Act ("* * * Studios of Foreign Stations") are as follows.* In a daily newspaper of general circulation in the largest city in the principal area to be served in the U.S.A. by the foreign broadcast station, at least twice a week for 2 consecutive weeks within a three-week period.

(3) *Notice requirements for applicants for a change in station location are as follows.* In the community in which the station is located and the one in which it is proposed to be located, in a newspaper with publishing requirements as in paragraphs (c)(1)(i), (ii) or (iii) of this section.

(4) The notice required in paragraphs (c)(1), (2) and (3) of this section shall contain the information described in paragraph (f) of this section.

(d) The licensee of an operating broadcast station who files an application or amendment thereto which is subject to the provisions of this section must gibe notice as follows:

(1) An applicant who files for renewal of a broadcast station license, other than a low power TV station license not locally originating programming as defined by § 74.701(h), FM translator station, FM booster station, TV booster station or a TV translator station license, must give notice of this filing by broadcasting announcements on applicant's station. (Sample and schedule of announcements are below.) Newspaper publication is not required. An applicant who files for renewal of a low power TV station license not locally originating programming as defined by § 74.701(h), FM translator station, FM booster station, TV booster station or TV translator station licensee will comply with (g) below.

(2) An applicant who files an amendment of an application for renewal of a broadcast station lincense will comply with paragraph (d)(1) of this section.

(3) An applicant who files for modification, assignment or transfer of a broadcast station license (except for International broadcast, low power TV, TV translator, TV booster, FM translator and FM booster stations) shall give notice of the filing in a newspaper as described in paragraph (c) of this section, and also broadcast the same notice over the station as follows:

(i) At least once daily on four days in the second week immediately following either the tendering for filing of the application or immediately following notification to the applicant by the FCC that Public Notice is required pursuant to §§ 73.3571, 73.3572, 73.3573 or § 73.3578. For commercial radio stations these announcements shall be made between 7 a.m. and 9 a.m. and/or 4 p.m. and 6 p.m. For stations which neither operate between 7 a.m. and 9 a.m. nor between 4 p.m. and 6 p.m., these announcements shall be made during the first two hours of broadcast operation. For commercial TV stations, these announcements shall be made between 6 p.m. and 11 p.m. (5 p.m. and 10 p.m. Central and Mountain time).

(4) The broadcast notice requirements for those filing renewal applications and amendments thereto are as follows:

(i) *Pre-filing announcements.* During the period and beginning on the first day of the sixth calendar month prior to the expiration of the license, and continuing to the date on which the application is filed, the following announcement shall be broadcast on the

1st and 16th day of each calendar month. Stations broadcasting primarily in a foreign language should broadcast the announcements in that language.

On (*date of last renewal grant*) (*Station's call letters*) was granted a license by the Federal Communication Commission to serve the public interest as a public trustee until (*expiration date*).

Our license will expire on (*date*). We must file an application for renewal with the FCC (*date four calendar months prior to expiration date*). When filed, a copy of this application will be available for public inspection during our regular business hours. It contains information concerning this station's performance during the last (*period of time covered by the application*).

Individuals who wish to advise the FCC of facts relating to our renewal application and to whether this station has operated in the public interest should file comments and petitions with the FCC by (*date first day of last full calendar month prior to the month of expiration*).

Further information concerning the FCC's broadcast license renewal process is available at (*address of location of the station's public inspection file*) or may be obtained from the FCC, Washington, DC 20554.

(A) This announcement shall be made during the following time periods:

(*1*) For commercial TV stations—at least two of the required announcements between 6 p.m. and 11 p.m. (5 p.m. and 10 p.m. Central and Mountain Time).

(*2*) For commercial radio stations—at least two of the required announcements between 7 a.m. and 9 a.m. and/or 4 p.m. and 6 p.m. For stations which neither operate between 7 a.m. and 9 a.m. nor between 4 p.m. and 6 p.m., at least two of the required announcements shall be made during the first two hours of broadcast operation.

(*3*) For noncommercial educational stations, at the same time as commercial stations, except that such stations need not broadcast the announcement during any month during which the station does not operate.

(ii) *Post-filing announcements.* During the period beginning of the date on which the renewal application is filed to the sixteenth day of the next to last full calendar month prior to the expiration of the license, all applications for renewal of broadcast station licenses shall broadcast the following announcement on the 1st and 16th day of each calendar month. Stations broadcasting primarily in a foreign language should broadcast the announcements in that language.

On (*date of last renewal grant*) (*Station's call letters*) was granted a license by the Federal Communications Commission to serve the public interest as a public trustee until (*expiration date*).

Our license will expire on (*date*). We have filed an application for renewal with the FCC.

A copy of this application is available for public inspection during our regular business hours. It contains information concerning this station's performance during the last (*period of time covered by application*).

Individuals who wish to advise the FCC of facts relating to our renewal application and to whether this station has operated in the public interest should file comments and petitions with the FCC by (*date first day of last full calendar month prior to the month of expiration*).

Further information concerning the FCC's broadcast license renewal process is available at (*address of location of the station's public inspection file*) or may be obtained from the FCC, Washington, DC 20554.

(A) This announcement shall be made during the following time periods:

(*1*) For commercial TV stations—at least three of the required announcements between 6 p.m. and 11 p.m. (5 p.m. and 10 p.m. Central and Mountain time), at least one announcement between 9 a.m. and 1 p.m., at least one announcement between 1 p.m. and 5 p.m., and at least one announcement between 5 p.m. and 7 p.m.

(*2*) For commercial radio stations—at least three of the required announcements between 7 a.m. and 9 a.m. and/or 4 p.m. and 6 p.m., at least one announcement between 9 a.m. and noon, at least one announcement between noon and 4 p.m., and at least one announcement between 7 p.m. and midnight. For stations which do not operate between 7 a.m. and 9 a.m. or between 4 p.m. and 6 p.m., at least three of the required announcements shall be made during the first two hours of broadcast operation.

(*3*) For noncommercial educational stations, at the same time as commercial stations, except that such stations need not broadcast the announcement during any month during which the station does not operate. In such instances noncommercial educational stations shall meet the requirements in the exact order specified in paragraph (d)(4)(ii)(A) (*1*) or (*2*) of this section (e.g., if only four renewal notices are broadcast by an educational TV licensee, 3 must be broadcast between 6 p.m. and 11 p.m. and the fourth between 9 a.m. and 1 p.m.).

(iii) TV broadcast stations (commercial and noncommercial educational), in presenting the pre- and post-filing announcements, must use visuals with the licensee's and the FCC's addresses when this information is being orally presented by the announcer.

(iv) Stations which have not received a renewal grant since the filing of their previous renewal application, shall use the following first paragraph for the pre-filing and the post-filing announcements:

(*Station's call letters*) is licensed by the Federal Communications Commission to serve the public interest as a public trustee.

(e) When the station in question is the only operating station in its broadcast service which is located in the community involved, or if it is a noncommercial educational station, publication of the notice in a newspaper, as provided in paragraph (c) of this section is not required, and publication by broadcast over that station as provided in paragraph (d) of this section shall be deemed sufficient to meet the notice requirements of this section. Noncommercial educational broadcast stations which do not broadcast during the portion of the year in which the period of broadcast of notice falls must comply with the provisions of paragraph (c) of this section.

(f) The notice required by paragraphs (c) and (d) of this section shall contain, when applicable, the following information, except as otherwise provided in paragraphs (d) (1) and (2) and (e) of this section in regard to renewal applications:

(1) The name of the applicant, if the applicant is an individual; the names of all partners, if the applicant is a partnership; or the names of all officers and directors and of those persons holding 10% or more of the capital stock or other ownership interest if the applicant is a corporation or an unincorporated association. (In the case of applications for assignment or transfer of control, information should be included for all parties to the application.)

(2) The purpose for which the application was or will be filed (such as, construction permit, modification, assignment or transfer of control).

(3) The date when the application or amendment was tendered for filing with the FCC.

(4) The call letters, if any, of the station, and the frequency or channel on which the station is operating or proposes to operate.

(5) In the case of an application for construction permit for a new station, the facilities sought, including type and class of station, power, location of studios, transmitter site and antenna height.

(6) In the case of an application for modification of a construction permit or license, the exact nature of the modification sought.

(7) In the case of an amendment to an application, the exact nature of the amendment.

(8) In the case of applications for a permit pursuant to Section 325(b) of the Communications Act ("* * * studios of foreign stations"), the call letters and location of the foreign radio broadcast station, the frequency or channel on which it operates, and a description of the programs to be transmitted over the station.

(9) A statement that a copy of the application, amendment(s), and related material are on file for public inspection at a stated address in the community in which the station is located or is proposed to be located. See §§ 73.3526 and 73.3527.

(g) An applicant who files for an authorization, major modifications, assignment, transfer or renewal, or a major amendment thereto, for a low power TV, TV translator, TV booster, FM translator, or FM booster station must give notice of this filing in a daily, weekly or biweekly newspaper of general circulation in the community or area to be served. (An applicant who files for renewal of a low power TV station locally originating programming as defined by § 74.701(h) must give notice pursuant to (d)(1) of this section.) The filing notice will be given immediately following the tendering for filing of the application or amendment, or immediately following notification to the applicant by the FCC that public notice is required pursuant to §§ 73.3572, 73.3573, or 73.3578.

(1) Notice requirements for these applicants are as follows:

(i) In a newspaper at least one time; or

(ii) If there is no newspaper published or having circulation in the community or area to be served, the applicant shall determine an appropriate means of providing the required notice to the general public, such as posting in the local post office or other public place. The notice shall state:

(A) The name of the applicant, the community or area to be served, and the transmitter site.

(B) The purpose for which the application was filed.

(C) The date when the application or amendment was filed with the FCC.

(D) The output channel or channels on which the station is operating or proposes to operate and the power used or proposed to be used.

(E) In the case of an application for changes in authorized facilities, the nature of the changes sought.

(F) In the case of a major amendment to an application, the nature of the amendment.

(G) A statement that the station engages in or intends to engage in rebroadcasting, and the call letters, location and channel of operation of each station whose signals it is rebroadcasting or intends to rebroadcast.

(h) The applicant may certify in the appropriate application that it has or will comply with the public notice requirements contained in paragraphs (c), (d) or (g) of this section. However, an applicant for renewal of license shall, within 7 days of the last day of broadcast of the required publication announcements, place in its public inspection file a statement certifying compliance with § 73.3580 along with the dates and times that the pre-filing and post-filing notices were broadcast and the text thereof. This certification need not be filed with the Commission but shall be retained in the public inspection file for as long as the application to which it refers.

(i) Paragraphs (a) through (h) of this section apply to major amendments to license renewal applications. See § 73.3578(a).

[44 FR 38504, July 2, 1979, as amended at 44 FR 65765, Nov. 15, 1979; 45 FR 6402, Jan. 28, 1980; 46 FR 36852, July 16, 1981; 47 FR 17066, Apr. 21, 1982; 49 FR 33664, Aug. 24, 1984; 49 FR 47844, Dec. 7, 1984; 50 FR 40015, Oct. 1, 1985; 52 FR 21686, June 9, 1987; 52 FR 31401, Aug. 20, 1987; 53 FR 26074, July 11, 1988]

§ 73.3584 Procedure for filing petitions to deny.

(a) Except in the case of applications for new low power TV, TV translator or TV booster stations, for major changes in the existing facilities of such stations, or for applications for a change in output channel tendered by displaced low power TV and TV translator stations pursuant to § 73.3572(a)(1), any party in interest may file with the Commission a Petition to Deny any application (whether as originally filed or if amended so as to require a new file number pursuant to §§ 73.3571(j), 73.3572(b), 73.3573(b), 73.3574(b) or 73.3578) for which local notice pursuant to § 73.3580 is required, provided such petitions are filed prior to the day such applications are granted or designated for hearing; but where the FCC issues a public notice pursuant to the provisions of §§ 73.3571(c), 73.3572(c) or § 73.3573(d), establishing a "cut-off" date, such petitions must be filed by the date specified. In the case of applications for transfers and assignments of construction permits or station licenses, Petitions to Deny must be filed not later than 30 days after issuance of a public notice of the acceptance for filing of the applications. In the case of applications for renewal of license, Petitions to Deny may be filed at any time up to the last day for filing mutually exclusive applications under § 73.3516(e). Requests for extension of time to file Petitions to Deny applications for new broadcast stations or major changes in the facilities of existing stations or applications for renewal of license will not be granted unless all parties concerned, including the applicant, consent to such requests, or unless a compelling showing can be made that unusual circumstances make the filing of a timely petition impossible and the granting of an extension warranted.

(b) Except in the case of applications for new low power TV or TV translator stations, or for major changes in the existing facilities of such stations, the applicant may file an opposition to any Petition to Deny, and the Petitioner a reply to such opposition in which allegations of fact or denials thereof shall be supported by affidavit of a person or persons with personal knowledge thereof. The times for filing such oppositions and replies shall be those provided in § 1.45 except that as to a Petition to Deny an application for renewal of license, an opposition thereto may be filed within 30 days after the Petition to Deny is filed, and the party that filed the Petition to Deny may reply to the opposition within 20 days after opposition is due or within 20 days after the opposition is filed, whichever is longer. The failure to file an opposition or a reply will not necessarily be construed as an admission of fact or argument contained in a pleading.

(c) In the case of applications for new low power TV, TV translator, or TV booster stations, for major changes in the existing facilities of such stations, or for applications for a change in output channel tendered by displaced low power TV and TV translator stations pursuant to § 73.3572(a)(1), any party in interest may file with the FCC a Petition to Deny any applcation (whether as originally filed or if amended so as to require a new file number pursuant to § 73.3572(b)) for which local notice pursuant to § 73.3580 is required, provided such petitions are filed within 30 days of the FCC Public Notice proposing the application for grant (applicants may file oppositions within 15 days after the Petition to Deny is filed); but where the FCC selects a tentative permittee pursuant to Section 1.1601 *et seq.*, Petitions to Deny shall be accepted only if directed against the tentative selectee and filed after issuance of and within 15 days of FCC Public Notice announcing the tentative selectee. The applicant may file an opposition within 15 days after the Petition to Deny is filed. In cases in which the minimum diversity preference provided for in § 1.1623(f)(1) has been applied, an "objection to diversity claim" and opposition thereto, may be filed against any applicant receiving a diversity preference, within the same time period provided herein for Petitions and Oppositions. In all pleadings, allegations of fact or denials thereof shall be supported by appropriate certification. However, the FCC may announce, by the Public Notice announcing the acceptance of the last-filed mutually exclusive application, that a notice of Petition to Deny will be required to be filed no later than 30 days after issuance of the Public Notice.

(d) Untimely Petitions to Deny, as well as other pleadings in the nature of a Petition to Deny, and any other pleadings or supplements which do not lie as a matter of law or are otherwise procedurally defective, are subject to return by the FCC's staff without consideration.

[48 FR 27206, June 13, 1983, as amended at 52 FR 31401, Aug. 20, 1987; 53 FR 2499, Jan. 28, 1988; 55 FR 28914, July 16, 1990]

§ 73.3587 Procedure for filing informal objections.

Before FCC action on any application for an instrument of authorization, any person may file informal objections to the grant. Such objections may be submitted in letter form (without extra copies) and shall be signed. The limitation on pleadings and time for filing pleadings provided for in § 1.45 of the rules shall not be applicable to any objections duly filed under this section.

[44 FR 38507, July 2, 1979]

§ 73.3588 Dismissal of petitions to deny or withdrawal of informal objections.

(a) Whenever a petition to deny or an informal objection has been filed against any application, and the filing party seeks to dismiss or withdraw the petition to deny or the informal objection, either unilaterally or in exchange for financial consideration, that party must file with the Commission a request for approval of the dismissal or withdrawal, a copy of any written agreement related to the dismissal or withdrawal, and an affidavit setting forth:

(1) A certification that neither the petitioner nor its principals has received or will receive any money or other consideration in excess of legitimate and prudent expenses in exchange for the dismissal or withdrawal of the petition to deny;

(2) The exact nature and amount of any consideration received or promised;

(3) An itemized accounting of the expenses for which it seeks reimbursement; and

(4) The terms of any oral agreement related to the dismissal or withdrawal of the petition to deny.

In addition, within 5 days of petitioner's request for approval, each remaining party to any written or oral agreement must submit an affidavit setting forth:

(5) A certification that neither the applicant nor its principals had paid or will pay money or other consideration in excess of the legitimate and prudent expenses of the petitioner in exchange for dismissing or withdrawing the petition to deny; and

(6) The terms of any oral agreement relating to the dismissal or withdrawal of the petition to deny.

(b) Citizens' agreements. For purposes of this section, citizens agreements include agreements arising whenever a petition to deny or informal objection has been filed against any application and the filing party seeks to dismiss or withdraw the petition or objection in exchange for nonfinancial consideration (*e.g.*, programming, ascertainment or employment initiatives). The parties to such an agreement must file with the Commission a joint request for approval of the agreement, a copy of any written agreement, and an affidavit executed by each party setting forth:

(1) Certification that neither the petitioner, nor any person or organization related to the petitioner, has received or will receive any money or other consideration in connection with the citizens' agreement other than legitimate and prudent expenses incurred in prosecuting the petition to deny;

(2) Certification that neither the petitioner, nor any person or organization related to petitioner is or will be involved in carrying out, for a fee, any programming, ascertainment, employment or other non-financial initiative referred to in the citizens' agreement; and

(3) The terms of any oral agreement.

(c) For the purposes of this section:

(1) Affidavits filed pursuant to this section shall be executed by the applicant, permittee or licensee, if an individual; a partner having personal knowledge of the facts, if a partnership; or an officer having personal knowledge of the facts, if a corporation or association.

(2) A petition shall be deemed to be pending before the Commission from the time a petition is filed with the Commission until an order of the Commission granting or denying the petition is no longer subject to reconsideration by the Commission or to review by any court.

(3) "Legitimate and prudent expenses" are those expenses reasonably incurred by a petitioner in preparing, filing, and prosecuting its petition for which reimbursement is being sought.

(4) "Other consideration" consists of financial concessions, including but not limited to the transfer of assets or the provision of tangible pecuniary benefit, as well as non-financial concessions that confer any type of benefit on the recipient.

[54 FR 22598, May 25, 1989. Redesignated and amended at 55 FR 28914, July 16, 1990]

EFFECTIVE DATE NOTE: At 55 FR 28914, July 16, 1990, § 73.3524 was redesignated as § 73.3588 and the title and paragraphs (a) introductory text and (b) introductory text were revised effective October 4, 1990. For the convenience of the user, the superseded text of § 73.3524 appears in a note following § 73.3523.

§ 73.3589 Threats to file petitions to deny or informal objections.

(a) No person shall make or receive any payments in exchange for withdrawing a threat to file or refraining from filing a petition to deny or an informal objection. For the purposes of this section, reimbursement by an applicant of the legitimate and prudent expenses of a potential petitioner or objector incurred reasonably and directly in preparing to file a petition to deny will not be considered to be payment for refraining from filing a petition to deny or informal objection. Payments made directly to a potential petitioner or objector, or a person related to a potential petitioner or objector, to implement nonfinancial promises are prohibited unless specifically approved by the Commission.

(b) Whenever any payment is made in exchange for withdrawing a threat to file or refraining from filing a petition to deny or informal objection, the licensee must file with the Commission a copy of any written agreement related to the dismissal or withdrawal, and an affidavit setting forth:

(1) Certification that neither the would-be petitioner, nor any person or organization related to the would-be petitioner, has received or will receive any money or other consideration in connection with the citizens' agreement other than legitimate and prudent expenses reasonably incurred in preparing to file the petition to deny;

(2) Certification that unless such arrangement has been specifically approved by the Commission, neither the would-be petitioner, nor any person or organization related to the would-be petitioner, is or will be involved in carrying out, for a fee, any programming ascertainment, employment or other nonfinancial initiative referred to in the citizens' agreement; and

(3) The terms of any oral agreement.

(c) For purposes of this section:

(1) Affidavits filed pursuant to this section shall be executed by the licensee, if an individual; a partner having personal knowledge of the facts, if a partnership; or an officer having personal knowledge of the facts, if a corporation or association.

(2) "Legitimate and prudent expenses" are those expenses reasonably incurred by a would-be petitioner in preparing to file its petition for which reimbursement is being sought.

(3) "Other consideration" consists of financial concessions, including but not limited to the transfer of assets or the provision of tangible pecuniary benefit, as well as non-financial concessions that confer any type of benefit on the recipient.

[55 FR 28914, July 16, 1990]

Effective Date Note: At 55 FR 28914, July 16, 1990, § 73.3589 was added, effective October 4, 1990.

§ 73.3591 Grants without hearing.

(a) In the case of any application for an instrument of authorization, other than a license pursuant to a construction permit, the FCC will make the grant if it finds (on the basis of the application, the pleadings filed or other matters which it may officially notice) that the application presents no substantial and material question of fact and meets the following requirements:

(1) There is not pending a mutually exclusive application filed in accordance with paragraph (b) of this section;

(2) The applicant is legally, technically, financially, and otherwise qualified;

(3) The applicant is not in violation of provisions of law, the FCC rules, or established policies of the FCC; and

(4) A grant of the application would otherwise serve the public interest, convenience and necessity.

(b) In making its determinations pursuant to the provisions of paragraph (a) of this section, the FCC will not consider any other application, or any application if amended so as to require a new file number, as being mutually exclusive or in conflict with the application under consideration unless such other application was substantially complete, or, in the case of low power TV and TV translator stations, complete and sufficient, and tendered for filing by:

(1) The close of business on the day preceding the day designated by Public Notice as the day the listed ap-

plication is to be available and ready for processing;

(2) The date prescribed in § 73.3516(e) in the case of applications which are mutually exclusive with applications for renewal of license of broadcast stations; or

(3) The close of business on the day designated by the FCC pursuant to § 73.3564(d) as the date(s) for filing low power TV or TV translator applications.

(c) If a petition to deny the application has been filed in accordance with § 73.3584 and the FCC makes the grant in accordance with paragraph (a) of this section, the FCC will deny the petition and issue a concise statement setting forth the reasons for denial and disposing of all substantial issues raised by the petition.

[44 FR 38507, July 2, 1979, as amended at 50 FR 47844, Dec. 7, 1984]

§ 73.3592 Conditional grant.

(a) Where a grant of an application would preclude the grant of any application or applications mutually exclusive with it, the FCC may, if the public interest will be served thereby, make a conditional grant of one of the applications and designate all of the mutually exclusive applications for hearing. Such conditional grant will be made upon the express condition that such grant is subject to being withdrawn if, t the hearing, it is shown that public nterest will be better served by a rant of one of the other applications. Such conditional grants will be issued nly where it appears:

(1) That some or all of the applicaions were not filed in good faith but ere filed for the purpose of delaying r hindering the grant of another aplication; or

(2) That public interest requires the rompt establishment of broadcast ervice in a particular community or rea; or

(3) That a grant of one or more aplications would be in the public interst, and that a delay in making a grant any applicant until after the conlusion of a hearing on all applications ight jeopardize the rights of the nited States under the provisions of ternational agreement to the use of he frequency in question; or

(4) That a grant of one application would be in the public interest, and that it appears from an examination of the remaining applications that they cannot be granted because they are in violation of provisions of the Communications Act, other statutes, or the provisions of the FCC rules.

(b) When two or more applications for the same AM, FM or TV assignment have been designated for hearing, the FCC may, if the public interest will be served thereby, make a conditional grant to a group composed of any two or more of the competing applicants, such grant to terminate when the successful applicant commences operation under the terms of a regular authorization. No conditional grant will be made unless all of the competing applicants have been afforded a reasonable opportunity to participate in the group seeking the conditional grant. In its application, the group shall include a special showing as to the need for the service pending operation by the successful applicant under the terms of a regular authorization; the effect, if any, of a grant on the position of any applicant which is not a member of the group; and any other factors which are deemed pertinent to the public interest judgment.

[44 FR 38507, July 2, 1979]

§ 73.3593 Designation for hearing.

If the FCC is unable, in the case of any application for an instrument of authorization, to make the findings specified in § 73.3591(a), it will formally designate the application for hearing on the grounds or reasons then obtaining and will forthwith notify the applicant and all known parties in interest of such action and the grounds and reasons therefor, specifying with particularity the matters and things in issue but not including issues or requirements phrased generally.

[44 FR 38508, July 2, 1979]

§ 73.3594 Local public notice of designation for hearing.

(a) Except as otherwise provided in paragraph (c) of this section when an application subject to the provisions of § 73.3580 (except for applications for

International broadcast, low power TV, TV translator, FM translator, and FM booster stations) is designated for hearing, the applicant shall give notice of such designation as follows: Notice shall be given at least twice a week, for 2 consecutive weeks within the 3-week period immediately following release of the FCC's order, specifying the time and place of the commencement of the hearing, in a daily newspaper of general circulation published in the community in which the station is located or proposed to be located.

(1) However, if there is no such daily newspaper published in the community, the notice shall be given as follows:

(i) If one or more weekly newspapers of general circulation are published in the community in which the station is located or proposed to be located, notice shall be given in such a weekly newspaper once a week for 3 consecutive weeks within the 4-week period immediately following the release of the FCC's order, specifying the time and place of the commencement of the hearing;

(ii) If no weekly newspaper of general circulation is published in the community in which the station is located or proposed to be located, notice shall be given at least twice a week for 2 consecutive weeks within the 3-week period immediately following the release of the FCC's orders, specifying the time and place of the commencement of the hearing in the daily newspaper having the greatest general circulation in the community in which the station is located or proposed to be located.

(2) In the case of an application for a permit pursuant to Section 325(b) of the Communications Act, the notice shall be given at least twice a week for 2 consecutive weeks within the 3-week period immediately following release of the FCC's order, specifying the time and place of the commencement of the hearing in a daily newspaper of general circulation in the largest city in the principal area to be served in the United States by the foreign radio broadcast station.

(3) In the case of an application for change in the location of a station, the notice shall be given both in the community in which the station is located and in the community in which the station is proposed to be located.

(b) When an application which is subject to the provisions of § 73.3580 and which seeks modification, assignment, transfer, or renewal of an operating broadcast station is designated for hearing (except for applications for an International broadcast, low power TV, TV translator, FM translator, or FM booster stations), the applicant shall, in addition to giving notice of such designation as provided in paragraph (a) of this section, cause the same notice to be broadcast over that station at least once daily for 4 days in the second week immediately following the release of the FCC's order, specifying the time and place of the commencement of the hearing. In the case of both commercial and noncommercial TV broadcast stations such notice shall be broadcast orally with the camera focused on the announcer. The notice required by this paragraph shall be broadcast during the following periods:

(1) For commercial TV stations, between 7:00 p.m. and 10:00 p.m.

(2) For commercial AM and FM stations, between 7:00 a.m. and 10:00 a.m., but if such stations do not operate during those hours, then between 6:00 p.m. and 9:00 p.m.

(3) For noncommercial educational TV stations, between 7:00 p.m. and 10:00 p.m., but if the period of broadcast of notice falls within a portion of the year during which such stations do not broadcast, then such stations need not comply with the provisions of this paragraph.

(4) For noncommercial educational AM and FM stations, between 3:00 p.m. and 10:00 p.m., but if the period of broadcast of notice falls within a portion of the year during which such stations do not broadcast, then such stations need not comply with the provisions of this paragraph.

(c) If the station in question is the only operating station in its broadcast service which is located in the community involved, or if it is a noncommercial educational station, publication of the notice in a newspaper, as provided in paragraph (a) of this section, is not required, and publication by broadcast over that station as provided in paragraph (b) of this section shall be deemed sufficient to meet the requirements of paragraphs (a) and (b) of this section. However, noncommercial educational stations which do not broadcast during the portion of the year in which the period of broadcast of notice falls must comply with the provisions of paragraph (a) of this section.

(d) The notice required by paragraphs (a) and (b) of this section shall state:

(1) The name of the applicant or applicants designated for hearing.

(2) The call letters, if any, of the stations or stations involved, and the frequencies or channels on which the station or stations are operating or proposed to operate.

(3) The time and place of the hearing.

(4) The issues in the hearing as listed in the FCC's order or summary of designation for hearing.

(5) A statement that a copy of the application, amendment(s), and related material are on file for public inspection at a stated address in the community in which the station is located or is proposed to be located. See §§ 73.3526 and 73.3527.

(e) When an application for renewal of license is designated for hearing, the notice shall contain the following additional statements:

(1) Immediately preceding the listing of the issues in the hearing:

The application of this station for a renewal of its license to operate this station in the public interest was tendered for filing with the Federal Communications Commission on (*date*). After considering this application, the FCC has determined that it is necessary to hold a hearing to decide the following questions:

(2) Immediately following the listing of the issues in the hearing:

The hearing will be held at (*place of hearing*) commencing at (*time*), on (*date*). Members of the public who desire to give evidence concerning the foregoing issues should write to the Federal Communications Commission, Washington, DC 20554, not later than (*date*). Letters should set forth in detail the specific facts concerning which the writer wishes to give evidence. If the FCC believes that the evidence is legally competent, material, and relevant to the issues, it will contact the person in question.

(Here the applicant shall insert, as the date on or before which members of the public who desire to give evidence should write to the FCC, the date 30 days after the date of release of the FCC's order specifying the time and place of the commencement of the hearing.)

(f) When an application for a low power TV, TV translator, FM translator, or FM booster station which is subject to the provisions of § 73.3580 is designated for hearing, the applicant shall give notice of such designation as follows: Notice shall be given at least once during the 2-week period immediately following release of the FCC's order, specifying the time and place of the commencement of the hearing in a daily, weekly or biweekly publication having general circulation in the community or area to be served. However, if there is no publication of general circulation in the community or area to be served, the applicant shall determine an appropriate means of providing the required notice to the general public, such as posting in the local post office or other public place. The notice shall state:

(1) The name of the applicant or applicants designated for hearing.

(2) The call letters, if any, of the station or stations involved, the output channel or channels of such stations, and, for any rebroadcasting, the call letters, channel and location of the station or stations being or proposed to be rebroadcast.

(3) The time and place of the hearing.

(4) The issues in the hearing as listed in the FCC's order or summary of designation for hearing.

(5) If the application is for renewal of license, the notice shall contain, in addition to the information required by paragraphs (f) (1) through (4) of this section, the statements required by paragraph (e) of this section.

(g) Within 7 days of the last day of publication or broadcast of the notice required by paragraphs (a) and (b) of this section, the applicant shall file a statement in triplicate with the FCC setting forth the dates on which the notice was published, the newspaper in which the notice was published, the text of the notice, and/or, where applicable, the date and time the notice was broadcast and the text thereof. When public notice is given by other means, as provided in pararaph (f) of this section, the applicant shall file, within 7 days of the giving of such notice, the text of the notice, the means by which it was accomplished, and the date thereof.

(h) The failure to comply with the provisions of this section is cause for dismissal of an application with prejudice. However, upon a finding that applicant has complied (or proposes to comply) with the provisions of Section 311(a)(2) of the Communications Act, and that the public interest, convenience and necessity will be served thereby, the presiding officer may authorize an applicant, upon a showing of special circumstances, to publish notice in a manner other than that prescribed by this section; may accept publication of notice which does not conform strictly in all respects with the provisions of this section; or may extend the time for publishing notice.

[44 FR 38508, July 2, 1979, as amended at 47 FR 21495, May 18, 1982; 48 FR 9012, Mar. 3, 1983; 49 FR 38132, Sept. 27, 1984; 51 FR 19347, May 29, 1986; 52 FR 21686, June 9, 1987]

§ 73.3597 Procedures on transfer and assignment applications.

(a) If, upon the examination of an application for FCC consent to an assignment of a broadcast construction permit or license or for a transfer of control of a corporate permittee or licensee, it appears that the station involved has been operated on-air by the current licensee or permittee for less than one year, the application will be designated for hearing on appropriate issues unless the FCC is able to find that:

(1) The permit or license was not authorized either through the Minority Ownership Policy or after a comparative hearing or, in the case of low power TV and TV translator stations, the permit or license was not authorized after a lottery in which the permittee or licensee benefited from minority or diversity preferences;

(2) The application involves an FM translator station or FM booster station only;

(3) The application involves a *pro forma* assignment or transfer of control; or

(4) The assignor or transferor has made an affirmative factual showing, supported by affidavits of a person or persons with personal knowledge thereof, which establishes that, due to unavailability of capital, to death or disability of station principals, or to other changed circumstances affecting the licensee or permittee occurring subsequent to the acquisition of the license or permit, FCC consent to the proposed assignment or transfer of control will serve the public interest, convenience and necessity.

(5) the assignee or transferee has made an affirmative factual showing, supported by affidavits of a person or persons with personal knowledge thereof, which established that the proposed transaction would involve an assignment or transfer to a minority-owned or minority controlled entity in furtherance of our Minority Ownership Policy.

(b)(1) The commencement date of the one-year period set forth in paragraph (a) of this section shall be the date on which the station initiated program tests in accordance with § 73.1620 or § 74.14.

(2) In determining whether the station has been operating on-air for one year, the FCC will calculate the period between the date of initiation of program tests (as specified in paragraph (b)(1) of this section) and the date the application for transfer or assignment is tendered for filing with the FCC.

(c)(1) As used in paragraphs (c) and (d) of this section:

(i) "Unbuilt station" refers to an AM, FM, or TV broadcast station or a low power TV or TV translator station for which a construction permit is outstanding, and, regardless of the stage of physical completion, as to which program tests have not commenced or, if required, been authorized.

(ii) "Seller" includes the assignor(s) of a construction permit for an unbuilt station, the transferor(s) of control of the holder of such construction permit, and any principal or such assignor(s) or transferor(s) who retains an interest in the permittee or acquires or reacquires such interest within 1 year after commencing program tests.

(2) The FCC will not consent to the assignment or transfer of control of the construction permit of an unbuilt station if the agreements or understandings between the parties provide for, or permit, payment to the seller of a sum in excess of the aggregate amount clearly shown to have been legitimately and prudently expended and to be expended by the seller, solely for preparing, filing, and advocating the grant of the construction permit for the station, and for other steps reasonably necessary toward placing the station in operation.

(3)(i) Applications for consent to the assignment of a construction permit or transfer of control shall, in the case of unbuilt stations, be accompanied by declarations both by the assignor (or transferor) and by the assignee (or transferee) that, except as clearly disclosed in detail in the applications, there are no agreements or understandings for reimbursement of the seller's expenses or other payments to the seller, for the seller's retention of any interest in the station, for options or any other means by which the seller may acquire such an interest, or for any other actual or potential benefit to the seller in the form of loans, the subsequent repurchase of the seller's retained interest, or otherwise.

(ii) When the seller is to receive reimbursement of his expenses, the applications of the parties shall include an itemized accounting of such expenses, together with such factual information as the parties rely upon for the requisite showing that those expenses represent legitimate and prudent outlays made solely for the purposes allowable under paragraph (c)(2) of this section.

(d)(1) Whenever an agreement for the assignment of the construction permit of an unbuilt station or for the transfer of control of the permittee of an unbuilt station, or any arrangement or understanding incidental thereto, provides for the retention by the seller of any interest in the station, or for any other actual or potential benefit to the seller in the form of loans or otherwise, the question is raised as to whether the transaction involves actual or potential gain to the seller over and above the legitimate and prudent out-of-pocket expenses allowable under paragraph (c)(2) of this section. In such cases the FCC will designate the assignment or transfer applications for evidentiary hearing. However, a hearing is not mandatory in cases coming within paragraph (d)(2) of this section.

(2) It is not intended to forbid the seller to retain an equity interest in an unbuilt station which he is transferring or assigning if the seller obligates himself, for the period ending 1 year after commencing program tests, to provide that part of the total capital made available to the station, up to the end of that period, which is proportionate to the seller's equity share in the permittee, taking into account equity capital, loan capital, and guarantees of interest and amortization payments for loan capital provided by the seller before the transfer or assignment. This condition will be satisfied:

(i) In the case of equity capital: By paid-in cash capital contributions proportionate to the seller's equity share;

(ii) In cases where any person who has an equity interest in the permittee provides loan capital: By the seller's provision of that part of the total loan capital provided by equity holders which is proportionate to the seller's equity share; and

(iii) In cases where any person co-signs or otherwise guarantees payments under notes given for loan capital provided by nonequity holders: By similar guarantees by the seller covering that part of such payments as is proportionate to the seller's equity share. However, this condition shall not be deemed to be met if the guarantees given by persons other than the seller cover, individually or collectively, a larger portion of such payments than the ratio of the combined equities of persons other than the seller to the total equity.

(3) In cases which are subject to the requirements of paragraphs (d)(2) (i), (ii) and (iii) of this section:

(i) The assignee's (or transferee's) application shall include a showing of the anticipated capital needs of the station through the first year of its operation and the seller's financial capacity to comply with the above requirements, in the light of such anticipated capital needs.

(ii) The FCC will determine from its review of the applications whether a hearing is necessary to ensure compliance with the above requirements.

(iii) Compliance with the above requirements will be subject to review by the FCC at any time, either when considering subsequently filed applications or whenever the FCC may otherwise find it desirable.

(iv) Within 30 days after any time when a seller is required to provide equity or loan capital or execute guarantees, the permittee shall furnish the FCC a written report containing sufficient details as to the sources and amounts of equity capital paid in, loan capital made available, or guarantees obtained as to enable the FCC to ascertain compliance with the above requirements.

(v) No steps shall be taken by the permittee to effectuate arrangements for the provision of equity or loan capital from sources not previously identified and disclosed to the FCC, until 30 days after the permittee has filed with the FCC a report of such arrangements and of provisions made for the seller's compliance with the above requirement.

(vi) The provisions of paragraphs (d)(3) (iv) and (v) of this section shall cease to apply 1 year after commencing program tests.

(4) Applications subject to this paragraph (d) of this section will, in any event, be designated for evidentiary hearing in any case where the agreements, arrangements or understandings with the seller provide for the seller's option to acquire equity in the station or to increase equity interests he retains at the time of the assignment or transfer of control. An evidentiary hearing will similarly be held in any case in which the assignee(s), transferee(s) or any of their principals, or any person in privity therewith, has an option to purchase all or part of the seller's retained or subsequently acquired equity interests in the station.

[44 FR 38509, July 2, 1979, as amended at 47 FR 24580, June 7, 1982; 47 FR 55930, Dec. 14, 1982; 48 FR 9012, Mar. 3, 1983; 48 FR 27207, June 13, 1983; 50 FR 6946, Feb. 19, 1985; 53 FR 36787, Sept. 22, 1988]

§ 73.3598 Period of construction.

(a) *TV broadcast stations.* Each original construction permit for the construction of a new TV broadcast station, or to make changes in an existing station, shall specify a period of no more than 24 months from the date of issuance of the original construction permit within which construction shall be completed and application for license filed.

(b) *Other broadcast, auxiliary and Instructional TV Fixed Stations.* Each original permit for the construction of a new AM, FM or International Broadcast; low power TV; TV translator; TV booster; FM translator; FM booster; broadcast auxiliary; or Instructional TV Fixed station, or to make changes in such existing stations, shall specify a period of no more than 18 months from the date of issuance of the original construction permit within which construction shall be completed and application for licensed be filed.

[50 FR 52779, Dec. 26, 1985, as amended at 52 FR 11656, Apr. 10, 1987; 52 FR 31402, Aug. 20, 1987]

§ 73.3599 Forefeiture of construction permit.

A construction permit shall be declared forfeited if the station is not ready for operation within the time specified therein or within such further time as the FCC may have allowed for completion, and a notation of the forefeiture of any construction permit under this provision will be placed in the records of the FCC as of the expiration date.

[50 FR 52779, Dec. 26, 1985]

§ 73.3601 Simultaneous modification and renewal of license.

When an application is granted by the FCC necessitating the issuance of a modified license less than 60 days prior to the expiration date of the license sought to be modified, and an application for renewal of the license is granted subsequent or prior thereto (but within 30 days of expiration of the present license), the modified li cense as well as the renewal license shall be issued to conform to the combined action of the FCC.

[44 FR 38511, July 2, 1979]

§ 73.3603 Special waiver procedure relative to applications.

(a) In the case of any broadcast applications designated for hearing, the parties may request the FCC to grant or deny an application upon the basis of the information contained in the applications and other papers specified in paragraph (b) of this section without the presentation of oral testimony. Any party desiring to follow this procedure should execute and file with the FCC a waiver in accordance with paragraph (e) of this section, and serve copies on all other parties, or a joint waiver may be filed by all the parties. Upon the receipt of waivers from all parties to a proceeding, the FCC will decide whether the case is an appropriate one for determination without the presentation of oral testimony. If it is determined by the FCC that, notwithstanding the waivers, the presentation of oral testimony is necessary, the parties will be so notified and the case will be retained on the hearing docket. If the FCC concludes that the case can appropriately be decided without the presentation of oral testimony, the record will be considered as closed as of the date the waivers of all the parties were first on file with the FCC.

(b) In all cases considered in accordance with this procedure, the FCC will decide the case on the basis of the information contained in the applications and in any other papers pertaining to the applicants or applications which are open to public inspection and which were on file with the FCC when the record was closed. The FCC may call upon any party to furnish any additional information which the FCC deems necessary to a proper decision. Such information shall be served upon all parties. The waiver previously executed by the parties shall be considered in effect unless within 10 days of the service of such information the waiver is withdrawn.

(c) Any decision by the FCC rendered pursuant to this section will be in the nature of a final decision, unless otherwise ordered by the FCC.

(d) By agreeing to the waiver procedure prescribed in this section, no party shall be deemed to waive the right to petition for reconsideration or rehearing, or to appeal to the courts from any adverse final decision of the FCC.

(e) The waiver provided for by this section shall be in the following form:

WAIVER

Name of applicant ....
Call letters ....
Docket No. ....

The undersigned hereby requests the FCC to consider its application and grant or deny it in accordance with the procedure prescribed in § 73.3603 of the FCC's rules and regulations. It is understood that all the terms and provisions of ——— are incorporated in this waiver.

[44 FR 38511, July 2, 1979]

§ 73.3605 Retention of applications in hearing status after designation for hearing.

(a) After an application for a broadcast facility is designated for hearing, it will be retained in hearing status upon the dismissal or amendment and removal from hearing of any other application or applications with which it has been consolidated for hearing.

(b) Where any applicants for a broadcast facility file a request pursuant to § 73.3525(a) for approval of an agreement to remove a conflict between their applications, the applications will be retained in hearing status pending such proceedings on the joint request as may be ordered and such action thereon as may be taken.

(1) If further hearing is not required on issues other than those arising out of the agreement, the proceeding shall be terminated and appropriate disposition shall be made of the applications.

(2) Where further hearing is required on issues unrelated to the agreement, the presiding officer shall continue to conduct the hearing on such other issues pending final action on the agreement, but the record in the proceeding shall not be closed until such final action on the agreement has been taken.

(3) In any case where a conflict between applications will be removed by an agreement for an engineering amendment to an application, the amended application shall be removed from hearing status upon final approval of the agreement and acceptance of the amendment.

(c) An application for a broadcast facility which has been designated for hearing and which is amended so as to eliminate the need for hearing or further hearing on the issues specified, other than as provided for in paragraph (b) of this section, will be removed from hearing status.

[44 FR 38511, July 2, 1979]

§ 73.3612 Annual employment report.

Each licensee or permittee of a commercially or noncommercially operated AM, FM, TV or International broadcast station with five or more fulltime employees shall file an annual employment report with the FCC on or before May 31 of each year on FCC Form 395.

[44 FR 38511, July 2, 1979]

§ 73.3613 Filing of contracts.

Each licensee or permittee of a commercial or noncommercial AM, FM, TV or International broadcast station shall file with the FCC copies of the following contracts, instruments, and documents together with amendments, supplements, and cancellations (with the substance of oral contracts reported in writing), within 30 days of execution thereof:

(a) Network service: Network affiliation contracts between stations and networks will be reduced to writing and filed as follows:

(1) All network affiliation contracts, agreements, or understandings between a TV broadcast or low power TV station and a national network. For the purposes of this paragraph the term network means any person, entity, or corporation which offers an interconnected program service on a regular basis for 15 or more hours per week to at least 25 affiliated television licensees in 10 or more states; and/or any person, entity, or corporation controlling, controlled by, or under common control with such perso entity, or corporation.

(2) Each such filing on or after Ma 1, 1969, initially shall consist of a wri ten instrument containing all of th terms and conditions of such contrac agreement or understanding withou reference to any other paper or document by incorporation or otherwis Subsequent filings may simply se forth renewal, amendment or chang as the case may be, of a particular contract previously filed in accordanc herewith.

(3) The FCC shall also be notified o the cancellation or termination of ne work affiliations, contracts for whic are required to be filed by this sectio

(b) Ownership or control: Contract instruments or documents relating t the present or future ownership o control of the licensee or permittee o of the licensee's or permittee's stock rights or interests therein, or relatin to changes in such ownership or control shall include but are not limite to the following:

(1) Articles of partnership, association, and incorporation, and change in such instruments;

(2) Bylaws, and any instruments effecting changes in such bylaws;

(3) Any agreement, document or instrument providing for the assignmen of a license or permit, or affecting, directly or indirectly, the ownership or voting rights of the licensee's or permittee's stock (common or preferred, voting or nonvoting), such as:

(i) Agreements for transfer of stock;

(ii) Instruments for the issuance of new stock; or

(iii) Agreements for the acquisition of licensee's or permittee's stock by the issuing licensee or permittee corporation. Pledges, trust agreements, options to purchase stock and other executory agreements are required to be filed. However, trust agreements or abstracts thereof are not required to be filed, unless requested specifically by the FCC. Should the FCC request an abstract of the trust agreement in lieu of the trust agreement, the licensee or permittee will submit the following information concerning the trust:

(A) Name of trust;

(B) Duration of trust;

(C) Number of shares of stock owned;

(D) Name of beneficial owner of stock;

(E) Name of record owner of stock;

(F) Name of the party or parties who have the power to vote or control the vote of the shares; and

(G) Any conditions on the powers of voting the stock or any unusual characteristics of the trust.

(4) Proxies with respect to the licensee's or permittee's stock running for a period in excess of 1 year, and all proxies, whether or not running for a period of 1 year, given without full and detailed instructions binding the nominee to act in a specified manner. With respect to proxies given without full and detailed instructions, a statement showing the number of such proxies, by whom given and received, and the percentage of outstanding stock represented by each proxy shall be submitted by the licensee or permittee within 30 days after the stockholders' meeting in which the stock covered by such proxies has been voted. However, when the licensee or permittee is a corporation having more than 50 stockholders, such complete information need be filed only with respect to proxies given by stockholders who are officers or directors, or who have 1% or more of the corporation's voting stock. When the licensee or permittee is a corporation having more than 50 stockholders and the stockholders giving the proxies are not officers or directors or do not hold 1% or more of the corporation's stock, the only information required to be filed is the name of any person voting 1% or more of the stock by proxy, the number of shares voted by proxy by such person, and the total number of shares voted at the particular stockholders' meeting in which the shares were voted by proxy.

(5) Mortgage or loan agreements containing provisions restricting the licensee's or permittee's freedom of operation, such as those affecting voting rights, specifying or limiting the amount of dividends payable, the purchase of new equipment, or the maintenance of current assets.

(6) Any agreement reflecting a change in the officers, directors or stockholders of a corporation, other than the licensee or permittee, having an interest, direct or indirect, in the licensee or permittee as specified by § 73.3615.

(c) Personnel: (1) Management consultant agreements with independent contractors; contracts relating to the utilization in a management capacity of any person other than an officer, director, or regular employee of the licensee or permittee; station management contracts with any persons, whether or not officers, directors, or regular employees, which provide for both a percentage of profits and a sharing in losses; or any similar agreements.

(2) The following contracts, agreements, or understandings need not be filed: Agreements with persons regularly employed as general or station managers or salesmen; contracts with program managers or program personnel; contracts with attorneys, accountants or consulting radio engineers; contracts with performers; contracts with station representatives; contracts with labor unions; or any similar agreements.

(d) The following contracts, agreements or understandings need not be filed but shall be kept at the station and made available for inspection upon request by the FCC: Contracts relating to the sale of broadcast time to "time brokers" for resale; subchannel leasing agreements for Subsidiary Communications Authorization operation; franchise/leasing agreements for operation of telecommunications services on the TV vertical blanking interval; time sales contracts with the same sponsor for 4 or more hours per day, except where the length of the events (such as athletic contests, musical programs and special events) broadcast pursuant to the contract is not under control of the station; and contracts with chief operators.

[44 FR 38512, July 2, 1979, as amended at 47 FR 21496, May 18, 1982; 50 FR 4664, Feb. 1, 1985; 50 FR 30951, July 31, 1985; 51 FR 9966, Mar. 24, 1986; 51 FR 15785, Apr. 28, 1986]

§ 73.3615 Ownership reports.

(a) With the exception of sole proprietorships and partnerships composed entirely of natural persons, each licensee of a commercial AM, FM, or TV broadcast station shall file an Ownership Report on FCC Form 323 once a year, on the anniversary of the date that its renewal application is required to be filed. Licensees owning multiple stations with different anniversary dates need file only one Report per year on the anniversary of their choice, provided that their Reports are not more than one year apart. A licensee with a current and unamended Report on file at the Commission may certify that it has reviewed its current Report and that it is accurate, in lieu of filing a new Report. Ownership Reports shall provide the following information as of a date not more than 60 days prior to the filing of the Report:

(1) In the case of an individual, the name of such individual;

(2) In the case of a partnership, the name of each partner and the interest of each partner. Except as specifically noted below, the names of limited partners shall be reported. A limited partner need not be reported, regardless of the extent of its ownership, if the limted partner is not materially involved, directly or indirectly, in the management or operation of the licensee and the licensee so certifies.

(i) Any change in partners or in their rights will require prior consent of the FCC upon an application for consent to assignment of license or permit. If such change involves less than a controlling interest, the application for FCC consent to such changes may be made upon FCC Form 316.

(3) In the case of a corporation, association, trust, estate or receivership, the data applicable to each:

(i)(A) The name, residence, citizenship, and stockholding of every officer, director, trustee, executor, administrator, receiver and member of an association, and any stockholder which holds stock accounting for 5 percent or more of the votes of the corporation, except that an investment company, insurance company, or bank trust department need be reported only if it holds stock amounting to 10 percent or more of the votes, provided that the licensee certifies that such entity has made no attempt to influence, directly or indirectly, the management or operation of the licensee and that there is no representation on the licensee's board or among its officers by any person professionally or otherwise associated with the entity.

(B) A licensee shall report any separate interests known to the licensee to be held ultimately by the same individual or entity, whether those interests are held in custodial accounts, by individual holding corporations or otherwise, if, when aggregated:

(*1*) The sum of all interests except those held by or through "passive investors" is equal to or exceeds 5 percent; or

(*2*) The sum of all interests held by or through "passive investors" is equal to or exceeds 10 percent; or

(*3*) The sum of the interests computed under paragraph (a)(3)(i)(B)(*1*) of this section plus the sum of the interests computed under paragraph (a)(3)(i)(B)(*2*) of this section is equal to or exceeds 10 percent.

(C) If the majority of the voting stock of a corporate licensee is held by a single individual or entity, no other stockholding need be reported for that licensee;

(ii) Full information as to family relationship or business association between two or more officials and/or stockholders, trustees, executors, administrators, receivers, and members of any association;

(iii) Capitalization with a description of the classes and voting power of stock authorized by the corporate charter or other appropriate legal instrument and the number of shares of each class issued and outstanding; and

(iv) Full information with respect to the interest and identity of any person having any direct, indirect, fiduciary, or beneficial interest in the licensee or in its stock accounting for 5% or more of its votes. For example:

(A) Where A is the trustee of stock held for beneficiary B, A shall be reported if A votes the stock or has the sole or shared power to dispose of the stock; B or any other party shall be reported if B or such party votes the stock or has sole power to dispose of the stock or has the power to revoke the trust or replace the trustee at will;

(B) Where X is not a natural person and has attributable ownership interest in the licensee under § 73.3555 of the rules, regardless of its position in the vertical ownership chain, an Ownership Report shall be filed for X which, except as specifically noted below, must contain the same information as required of a licensee. If X has a voting stockholder interest in the licensee, only those voting interests of X that are cognizable after application of the "multiplier" described in Note 2(d) of § 73.3555 of the rules, if applicable, shall be reported. If X is a corporation, whether or not its interest in the licensee is by virtue of its ownership of voting stock, the officers and directors shall be reported. With respect to those officers and directors whose duties and responsibilities are wholly unrelated to the licensee, and who wish to be relieved of attribution in the licensee, the name, title and duties of these officers and directors, with statements properly documenting that their duties do not involve the licensee, shall be reported.

(4) In the case of all licensees:

(i) A list of all contracts still in effect required to be filed with the FCC by § 73.3613 showing the date of execution and expiration of each contract; and

(ii) Any interest which the licensee may have in any other broadcast station.

(b) Except as specifically noted below, each permittee of a commercial AM, FM or TV broadcast station shall file an Ownership Report on FCC Form 323 (1) within 30 days of the date of grant by the FCC of an application for original construction permit and (2) on the date that it applies for a station license. The Ownership Report of the permittee shall give the information required by the applicable portions of paragraph (a) of this section. A permittee with a current and unamended Report on file at the Commission may certify that it has reviewed its current Report and it is accurate, in lieu of filing a new Report.

(c) Before any change is made in the organization, capitalization, officers, directors, or stockholders of a corporation other than licensee or permittee, which results in a change in the control of the licensee or permittee, prior FCC consent must be received under § 73.3540. A transfer of control takes place when an individual or group in privity, gains or loses affirmative or negative (50%) control. See instructions on FCC Form 323 (Ownership Report).

(d) Each licensee of a noncommercial educational AM, FM or TV broadcast station shall file an Ownership Report on FCC Form 323-E at the time the application for renewal of station license is required to be filed. Licensees owning more than one noncommercial educational AM, FM or TV broadcast station need file only one Ownership Report at 5 year intervals for TV stations and 7 year intervals for AM and FM stations. Ownership Reports shall give the following information as of a date not more than 30 days prior to the filing of the Ownership Report:

(1) The following information as to all officers, members of governing board, and holders of 1% or more ownership interest (if any): Name, residence, office held, citizenship, principal profession or occupation, and by whom appointed or elected.

(2) Full information with respect to the interest and identity of any individual, organization, corporation, association, or any other entity which has direct or indirect control over the licensee or permittee.

(3) A list of all contracts still in effect required by § 73.3613 to be filed with the FCC, showing the date of execution and expiration of each contract.

(4) Any interest which the licensee or permittee or any of its officers, members of the governing board, and holders of 1% or more ownership interest (if any) held in any other broadcast station.

(e) Each permittee of a noncommercial educational AM, FM or TV broadcast station shall file an Ownership Report on FCC Form 323-E within 30 days of the date of grant by the FCC of an application for original construction permit. The Ownership Report of the permittee shall give the information required by the applicable form.

(f) A supplemental Ownership Report on FCC Form 323-E shall be filed by each licensee or permittee within 30 days after any change occurs in the information required by the Ownership Report from that previously reported. Such report should include, without limitation:

(1) Any change in organization;

(2) Any change in officers or directors;

(3) Any transaction affecting the ownership (direct or indirect) or voting rights with respect to the licensee or permittee (or with respect to any stock interest therein).

(g) A copy of all ownership and supplemental ownership reports and related material filed pursuant to this section shall be maintained and made available for public inspection locally as required by §§ 73.3526 and 73.3527.

[44 FR 38513, July 2, 1979, as amended at 49 FR 19498, May 8, 1984; 50 FR 27450, July 3, 1985; 50 FR 40016, Oct. 1, 1985; 52 FR 1632, Jan. 15, 1987; 53 FR 2499, Jan. 28, 1988; 53 FR 5684, Feb. 25, 1988; 53 FR 36787, Sept. 22, 1988]

§ 73.3999 Enforcement of 18 U.S.C. 1464 (restrictions on the transmission of obscene or indecent language).

The Commission will enforce the provisions of section 1464 of the United States Criminal Code, 18 U.S.C. 1464, on a twenty-four hour per day basis in accordance with Pub. L. No. 100-459.

[53 FR 52426, Dec. 28, 1989]

§ 73.4000 Listing of FCC policies.

The following sections list, solely for the purpose of reference and convenience, certain Policies of the FCC. The present listing of FCC policies and citations thereto should not be relied upon as an all-inclusive list, and the failure to include a policy in this list does not affect its validity. Each section bears the title of one Policy and the citations which will direct the user to the specific document(s) pertaining to that Policy.

[44 FR 36387, June 22, 1979]

§ 73.4005 Advertising—refusal to sell.

See 412 U.S. 94 (Supreme Court, 1973).

[44 FR 36388, June 22, 1979]

§ 73.4015 Applications for AM and FM construction permits, incomplete or defective.

See Public Notice, FCC 84-366, dated August 2, 1984, 49 FR 47331, December 3, 1984.

[49 FR 50048, Dec. 26, 1984]

§ 73.4017 Application processing: Commercial FM stations.

See Report and Order, Mass Media Bureau Docket 84-750, FCC 85-125, adopted March 4, 1985. —— FCC 2d ——; 50 FR 19936, May 13, 1985.

[50 FR 32416, Aug. 12, 1985]

§ 73.4045 Barter agreements.

See Order, FCC 72-167, adopted February 16, 1972. 33 FCC 2d 653; 37 FR 4009, February 25, 1972.

[44 FR 36388, June 22, 1979]

§ 73.4050 Children's TV programs.

(a) See Report and Policy Statement, Docket 19142, FCC 74-1174, adopted October 24, 1974. 50 FCC 2d 1; 39 FR 39396, November 6, 1974.

(b) See Report and Order; Policy Statement, Docket 19142, FCC 83-600, adopted December 22, 1983. 49 FR 1704, January 13, 1984.

[49 FR 14509, Apr. 12, 1984]

§ 73.4055 Cigarette advertising.

See 15 U.S.C. 1335.

[44 FR 36388, June 22, 1979]

§ 73.4060 Citizens agreements.

(a) See Report and Order, Docket 20495, FCC 75-1359, adopted December 10, 1975. 57 F.C.C. 2d 42; 40 F.R. 49730, December 30, 1975.

(b) See Memorandum Opinion and Order, FCC 78-875, adopted December 21, 1978. 70 F.C.C. 2d 1672.

[44 FR 58720, Oct. 11, 1979]

§ 73.4075 Commercials, loud.

See Memorandum Opinion and Order, BC Docket 79-168, FCC 84-300, adopted June 27, 1984. 49 FR 28077, July 10, 1984.

[49 FR 38132, Sept. 27, 1984]

§ 73.4082 Comparative broadcast hearings—specialized programming formats.

(a) See Memorandum Opinion and Order, FCC 80-33, adopted January 30, 1980. 75 FCC 2d 721.

(b) See Report and Order, Docket 79-137, FCC 79-331, adopted June 1, 1979. 72 FCC 2d 202.

(c) See Memorandum Opinion and Order, FCC 79-206, adopted March 30, 1979. 71 FCC 2d 460.

[47 FR 3792, Jan. 27, 1982]

§ 73.4091 Direct broadcast satellites.

(a) See Report and Order, General Docket 80-603, FCC 82-285, adopted June 23, 1982. 90 FCC 2d 676; 47 FR 31555, July 21, 1982.

(b) See Memorandum Opinion and Order, FCC 82-427, adopted September 23, 1982. 91 FCC 2d.

(c) See Memorandum Opinion and Order, FCC 82-498, adopted November 4, 1982. 91 FCC 2d.

[48 FR 9012, Mar. 3, 1983]

§ 73.4094 Dolby encoder.

See Public Notice dated July 10, 1974, 72 FCC 2d 790.

[45 FR 6403, Jan. 28, 1980]

§ 73.4095 Drug lyrics.

(a) See Public Notice, FCC 71-205, dated March 5, 1971. 28 FCC 2d 409; 36 FR 4901, March 13, 1971.

(b) See Memorandum Opinion and Order, FCC 71-428, adopted April 16, 1971. 31 FCC 2d 377; 36 FR 8090, April 29, 1971.

[44 FR 36388, June 22, 1979]

§ 73.4097 EBS attention signal tests on automated programming systems.

See Public Notice dated March 1, 1979. 72 FCC 2d 788; 44 FR 17792, March 23, 1979.

[49 FR 50049, Dec. 26, 1984]

§ 73.4099 Financial qualifications, certification of.

See Public Notice, FCC 87-97, adopted March 19, 1987. 52 FR 17333, May 7, 1987.

[53 FR 2499, Jan. 28, 1988]

§ 73.4100 Financial qualifications; new AM and FM stations.

See Public Notice, FCC 78-556, dated August 2, 1978. 69 FCC 2d 407; 43 FR 34841, August 7, 1978.

[44 FR 36388, June 22, 1979]

§ 73.4101 Financial qualifications, TV stations.

See Public Notice, FCC 79-299, dated May 11, 1979. 72 F.C.C. 2d 784; 44 FR 29160, May 18, 1979.

[45 FR 6403, Jan. 28, 1980]

§ 73.4102 FAA communications, broadcast of.

See Public Notice, FCC 72-105, dated February 2, 1972. 37 FR 3567, February 17, 1972.

[45 FR 6403, Jan. 28, 1980]

§ 73.4104 FM assignment policies and procedures.

See Report and Order, BC Docket 80-130, FCC 82-240, adopted May 20, 1982. 90 FCC 2d, 88; 47 FR 26625, June 21, 1982.

[47 FR 54448, Dec. 3, 1982]

§ 73.4107 FM broadcast assignments, Increasing availability of.

(a) See, First Report and Order MM Docket 84-231, FCC 84-640, adopted December 19, 1984. 50 FR 3514, January 25, 1985.

(b) See, Second Report and Order, MM Docket 84-231, FCC 85-124, adopted March 14, 1985. 50 FR 15558, April 19, 1985.

(c) See, Memorandum Opinion and Order, MM Docket 84-231, FCC 86-76, adopted February 10, 1986. 51 FR 9210, March 18, 1986.

(d) See Public Notice, 51 FR 26009, July 18, 1986.

[51 FR 26251, July 22, 1986, as amended at 52 FR 11656, Apr. 10, 1987]

§ 73.4108 FM transmitter site map submissions.

See Memorandum Opinion and Order and Public Notice, adopted October 24, 1986. 1 FCC Rcd 381 (1986); 51 FR 45945, December 23, 1986.

[52 FR 11656, Apr. 10, 1987]

§ 73.4110 Format changes of stations.

See Memorandum Opinion and Order, Docket 20682, FCC 76-744, adopted July 28, 1976. 60 FCC 2d 858; 41 FR 37153, September 2, 1976.

[44 FR 36388, June 22, 1979]

§ 73.4135 Interference to TV reception by FM stations.

See Public Notice, FCC 67-1012, dated August 30, 1967, 74 FCC 2d 619.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[44 FR 36388, June 22, 1979, as amended at 45 FR 28142, Apr. 28, 1980; 49 FR 45154, Nov. 15, 1984; 50 FR 5073, Feb. 6, 1985; 51 FR 26251, July 22, 1986]

§ 73.4140 Minority ownership; tax certificates and distress sales.

(a) See Public Notice, FCC 78-322, dated May 25, 1978. 68 FCC 2d 979; 43 FR 25188, June 9, 1978.

(b) See Public Notice, FCC 78-725, dated October 11, 1978. 43 FR 47612, October 16, 1978.

(c) See Policy Statement, General Docket 82-797, FCC 82-523, adopted December 2, 1982. 92 FCC 2d 849; 48 FR 5943, February 9, 1983.

(d) See Report and Order, General Docket 82-797, FCC 84-647, adopted December 21, 1984. 99 FCC 2d 1249; 50 FR 1239, January 10, 1985.

[44 FR 36388, June 22, 1979, as amended at 49 FR 38132, Sept. 27, 1984; 49 FR 50049, Dec. 26, 1984; 50 FR 47055, Nov. 14, 1985; 52 FR 11656, Apr. 10, 1987]

§ 73.4154 Network/AM, FM station affiliation agreements.

See Report, Statement of Policy, and Order, Docket 20721, FCC 77-206, adopted March 10, 1977. 63 FCC 2d 674.

[47 FR 28388, June 30, 1982]

§ 73.4157 Network signals which adver affect affiliate broadcast service.

See Public Notice, FCC 79-387, date April 20, 1970. 22 F.C.C. 2d 779.

[45 FR 6403, Jan. 28, 1980]

§ 73.4160 Night time service areas, clas and III AM stations; computation.

See Public Notice, FCC 76-800, date August 26, 1976. 61 FCC 2d 764; 41 F 36836, September 1, 1976.

[44 FR 36389, June 22, 1979]

§ 73.4163 Noncommercial nature of edu tional broadcast stations.

(a) See Second Report and Orde BC Docket 21136, FCC 81-204, adop ed April 23, 1981. 86 FCC 2d 141; 4 FR 27944, May 22, 1981.

(b) See Order, BC Docket 2113 FCC 82-327 adopted July 15, 1982. 9 FCC 2d 895; 47 FR 36171, August 1 1982.

(c) See Memorandum Opinion an Order, BC Docket 21136, FCC 84-10 adopted March 28, 1984. 97 FCC 2 255; 49 FR 13534, April 5, 1984.

(d) See, Public Notice, FCC 86-10 dated April 11, 1986. 51 FR 2180 June 16, 1986.

[47 FR 54448, Dec. 3, 1982, as amended at 5 FR 26251, July 22, 1986]

§ 73.4165 Obscene language.

(a) See Memorandum Opinion an Order, FCC 75-200, adopted Februar 12, 1975. 56 FCC 2d 94; 40 FR 1102 March 11, 1975.

(b) See FCC v. Pacifica Foundatio —U.S.—; 57 L Ed 2d 1073, 98 S. Ct.- 46 U.S.L.W. 5018 (1978).

(c) See Public Notice, FCC 63-3 dated January 10, 1963. 28 FR 41 January 16, 1963.

[44 FR 36389, June 22, 1979]

§ 73.4170 Obscene lyrics.

See letter to N. Markovitz date June 3, 1976. In response number 831 C 2-1109. Review denied: FCC 76-70 adopted August 5, 1976, 74 FCC 2 613.

(Secs. 4, 5, 303, 48 Stat., as amended, 106 1068, 1082 (47 U.S.C. 154, 155, 303))

[44 FR 36389, June 22, 1979, as amended a 45 FR 28142, Apr. 28, 1980]

§ 73.4180 Payment disclosure: Payola, plugola, kickbacks.

(a) See 47 U.S.C. 507.

(b) See Public Notice, FCC 70-593, dated June 4, 1970. 23 FCC 2d 588; 35 FR 9045, June 11, 1970.

[44 FR 36389, June 22, 1979, as amended at 49 FR 20504, May 15, 1984]

§ 73.4185 Political broadcasting and telecasting, the law of.

(a) See Public Notice, FCC 78-523, dated August 16, 1978. 69 FCC 2d 2209; 43 FR 36342, August 16, 1978.

(b) See Report and Order, BC Docket 82-564, FCC 83-529 adopted November 8, 1983. 95 FCC 2d 1236; 48 FR 53166, November 25, 1983.

[44 FR 36389, June 22, 1979, as amended at 49 FR 38132, Sept. 27, 1984]

§ 73.4190 Political candidate authorization notice and sponsorship identification.

See Joint Public Notice by the Federal Communications Commission and the Federal Election Commission, FCC 78-419, dated June 19, 1978. 69 FCC 2d 1129; 43 FR 30126, July 13, 1978.

[44 FR 36389, June 22, 1979]

§ 73.4195 Political advertising by UHF translators.

See Public Notice, FCC 76936, dated October 8, 1976. 62 FCC 2d 896; 41 FR 45043, October 14, 1976.

[44 FR 36389, June 22, 1979]

§ 73.4210 Procedure Manual: "The Public and Broadcasting".

See FCC 74-942, dated September 5, 1974. 49 FCC 2d 1; 39 FR 32288, dated September 5, 1974.

[44 FR 36389, June 22, 1979]

§ 73.4215 Program matter: Supplier identification.

See Public Notice, FCC 73-595, dated June 1, 1973. 41 FCC 2d 333; 38 FR 14979, June 7, 1973.

[44 FR 36389, June 22, 1979]

§ 73.4235 Short spacing agreements: FM stations.

See Public Notice, FCC 75-1367, dated December 15, 1975. 57 FCC 2d 1263; 40 FR 58893, December 19, 1975.

[44 FR 36389, June 22, 1979]

§ 73.4242 Sponsorship identification rules, applicability of.

See Public Notice dated September 3, 1975, 40 FR 41936, September 9, 1975.

[47 FR 28388, June 30, 1982]

§ 73.4246 Stereophonic pilot subcarrier use during monophonic programming.

See Report and Order, Docket 19571, FCC 73-680, adopted June 21, 1973. 41 FCC 2d 534; 38 FR 17021, June 28, 1973.

[47 FR 3792, Jan. 27, 1982]

§ 73.4247 STV: Competing applications.

See Second Report and Order, Docket 21502, FCC 81-13, adopted January 8, 1981. 85 FCC 2d 631; 46 FR 19937, April 2, 1981.

[47 FR 3792, Jan. 27, 1982]

§ 73.4250 Subliminal perception.

(a) See Public Notice, FCC 74-78, dated January 24, 1974. 44 FCC 2d, 1016; 39 FR 3714, January 29, 1974.

(b) See FCC Information Bulletin, "Subliminal Projection", dated November 1977.

[44 FR 36389, June 22, 1979]

§ 73.4255 Tax certificates: Issuance of.

See Public Notice, FCC 76-337, dated April 21, 1976. 59 FCC 2d, 91; 41 FR 17605, April 27, 1976.

[44 FR 36389, June 22, 1979]

§ 73.4260 Teaser announcements.

See Public Notice, FCC 62-592, dated June 1, 1962. 27 FR 5274, June 5, 1962.

[44 FR 36389, June 22, 1979]

§ 73.4265 Telephone conversation broadcasts (network and like sources).

See Memorandum Opinion and Order, FCC 75-1406, adopted December 18, 1975. 57 FCC 2d, 334; 41 FR 816, January 5, 1976.

[44 FR 36389, June 22, 1979]

§ 73.4266 Tender offer and proxy statements.

See *Policy Statement*, MM Docket 85-218, FCC 86-67, adopted January 30, 1986. 51 FR 9794, March 21, 1986.

[51 FR 26251, July 22, 1986]

§ 73.4267 Time brokerage.

See Policy Statement, Docket 78-355, FCC 80-621, adopted October 21, 1980. 82 FCC 2d 107.

[47 FR 3792, Jan. 27, 1982]

§ 73.4275 Tone clusters; audio attention-getting devices.

See Public Notice, FCC 76-610, dated July 2, 1976. 60 FCC 2d 920; 41 FR 28582, July 12, 1976.

[44 FR 36389, June 22, 1979]

§ 73.4280 Character evaluation of broadcast applicants.

See Report and Order and Policy Statement, Gen. Docket 81-500, BC Docket 78-108, FCC 85 648, adopted Dec. 10, 1985, 51 FR 3049, Jan. 23, 1986.

[51 FR 3069, Jan. 23, 1986]

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ALPHABETICAL INDEX—PART 74

AUTHORITY: Secs. 4, 303, 48 Stat. 1066, as amended, 1082, as amended; 47 U.S.C. 154, 303, unless otherwise noted. Interpret or apply secs. 301, 303, 307, 48 Stat. 1081, 1082, as amended, 1083, as amended; 47 U.S.C. 301, 303, 307.

Subpart—General; Rules Applicable to All Services in Part 74

§ 74.1 Scope.

(a) The rules in this subpart are applicable to the Experimental, Auxiliary and Special Broadcast, and Other Program Distributional Services.

(b) Rules in part 74 which apply exclusively to a particular service are contained in that service subpart, as follows: Experimental Broadcast Stations, subpart A; Remote Pickup Broadcast Stations, subpart D; Aural Broadcast STL and Intercity Relay Stations, subpart E; TV Auxiliary Broadcast Stations, subpart F; Low Power TV, TV Translator and TV Booster Stations, subpart G; Low Power Auxiliary Stations, subpart H; Instructional TV Fixed Service, subpart I; FM Broadcast Translator Stations and FM Broadcast Booster Stations, subpart L.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[47 FR 53022, Nov. 24, 1982, and 49 FR 32583, Aug. 15, 1984, as amended at 52 FR 31402, Aug. 20, 1987]

§ 74.2 General definitions.

Broadcast network-entity. A broadcast network-entity is an organization which produces programs available for simultaneous transmission by 10 or more affiliated broadcast stations and having distribution facilities or circuits available to such affiliated stations at least 12 hours each day.

Cable network-entity. A cable network-entity is an organization which produces programs available for simultaneous transmission by cable systems serving a combined total of at least 5,000,000 subscribers and having distribution facilities or circuits available to such affiliated stations or cable systems.

[51 FR 4601, Feb. 6, 1986]

§ 74.3 FCC inspections of stations.

(a) The licensee of a station authorized under this part must make the station available for inspection by representatives of the FCC during the station's business hours, or at any time it is in operation.

(b) In the course of an inspection or investigation, an FCC representative may require special equipment tests or program tests.

(c) The logs and records required by this part for the particular class or type of station must be made available upon request to representatives of the FCC.

[47 FR 53022, Nov. 24, 1982]

§ 74.5 Cross reference to rules in other parts.

Certain rules applicable to Experimental, Auxiliary, Special Broadcast and other Program Distribution services, some of which are also applicable to other services, are set forth in the following Parts of the FCC Rules and Regulations:

(a) Part 1, "Practice and procedure".

(1) Subpart A, "General Rules of Practice and Procedure". (§§ 1.1 to 1.120).

(2) Subpart B, "Hearing Proceedings". (§§ 1.120 to 1.364).

(3) Subpart C, "Rulemaking Proceedings". (§§ 1.399 to 1.430).

(4) Subpart G, "Schedule of Statutory Charges and Procedures for Payment". (§§ 1.1101 to 1.1120).

(5) Subpart H, "Ex Parte Presentations". (§§ 1.1200 to 1.1216).

(6) Subpart I, "Procedures Implementing the National Environmental Policy Act of 1969". (§§ 1.1301 to 1.1319).

(b) Part 2, "Frequency Allocations and Radio Treaty Matters, General Rules and Regulations", including subparts A, "Terminology"; B, "Allocation, Assignments and Use of Radio Frequencies"; C, "Emissions"; D, "Call Signs and Other Forms of Identifying Radio Transmissions"; and J, "Equipment Authorization Proceedings".

(c) Part 13, "Commercial Radio Operators".

(d) Part 17, "Construction, Marking and Lighting of Antenna Structures".

(e) Part 73, "Radio Broadcast Services".

[53 FR 2499, Jan. 28, 1988]

§ 74.12 Notification of filing of applications.

The provisions of § 73.1030 "Notification concerning interference to Radio Astronomy, Research, and Receiving Installations" apply to all stations authorized under this part of the FCC Rules except the following:

(a) Mobile remote pickup stations (subpart D).

(b) TV pickup stations (subpart F).

(c) Low power auxiliary stations (subpart H).

[44 FR 58735, Oct. 11, 1979, as amended at 44 FR 77167, Dec. 31, 1979; 47 FR 28388, June 30, 1982]

§ 74.13 Equipment tests.

(a) During the process of construction of any class of radio station listed in this part, the permittee, without further authority of the Commission, may conduct equipment tests for the purpose of such adjustments and measurements as may be necessary to assure compliance with the terms of the construction permit, the technical provisions of the application therefor, the technical requirements of this chapter, and the applicable engineering standards.

(b) Equipment tests may be continued so long as the construction permit shall remain valid.

(c) The authorization for tests embodied in this section shall not be construed as constituting a license to operate.

[38 FR 18378, July 10, 1973]

§ 74.14 Service or program tests.

(a) Upon completion of construction of a radio station in accordance with the terms of the construction permit, the technical provisions of the application therefor, technical requirements of this chapter, and applicable engineering standards, and when an application for station license has been filed showing the station to be in satisfactory operating condition, the permittee or any class of station listed in this part may, without further authority of the Commission, conduct service or program tests.

(b) Program test authority for stations authorized under this part will continue valid during Commission consideration of the application for license and during this period further extension of the construction permit is not required. Program test authority shall be automatically terminated with final action on the application for station license.

(c) The authorization for tests embodied in this section shall not be construed as approval by the Commission of the application for station license.

[38 FR 18378, July 10, 1973]

§ 74.15 Station license period.

(a) Licenses for experimental broadcast stations will be issued for a one year period.

(b) Licenses for stations or systems in the Auxiliary Broadcast Service held by a licensee of a broadcast station will be issued for a period running concurrently with the license of the associated broadcast station with which it is licensed. Licenses held by eligible networks for the purpose of providing program service to affiliated stations under subpart D of this part, and by eligible networks, cable television operators, motion picture producers and television program producers under subpart H of this part will be issued for a period running concurrently with the normal licensing period for broadcast stations located in the same area of operation.

(c) The license of an FM broadcast booster station or a TV broadcast booster station will be issued for a period running concurrently with the license of the FM radio broadcast station or TV broadcast station (primary station) with which it is used.

(d) Initial licenses for low power TV, TV translator and FM translator stations will ordinarily be issued for a period running until the date specified in this section for the State or Territory in which the station is located or, if issued after such date, to the next renewal date determined in accordance with this section. Low power TV and TV translator station licenses will ordinarily be renewed for 5 years and FM translator station licenses will be renewed for 7 years. However, if the FCC finds that the public interest, convenience or necessity will be served, it may issue either an initial license or a renewal thereof for a lesser term. The time of expiration of all licenses will be 3 a.m. local time, on the following dates and thereafter at 5 year intervals for low power TV and TV translator stations and at 7 year intervals for FM translator stations located in:

(1) Nevada:

(i) FM translators, February 1, 1990

(ii) LPTV and TV translators, February 1, 1988

(2) California:

(i) FM translators, April 1, 1990

(ii) LPTV and TV translators, April 1, 1988

(3) Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Maryland, Delaware, West Virginia, Ohio and the District of Columbia:

(i) FM translators, June 1, 1990

(ii) LPTV and TV translators, June 1, 1988

(4) Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Missouri, Kentucky, Tennessee, Indiana, Illinois, Michigan, Wisconsin, Puerto Rico and the Virgin Islands:

(i) FM translators, August 1, 1990

(ii) LPTV and TV translators, August 1, 1988

(5) Oklahoma and Texas:

(i) FM translators, October 1, 1990

(ii) LPTV and TV translators, October 1, 1988

(6) Kansas and Nebraska:

(i) FM translators, December 1, 1990

(ii) LPTV and TV translators, December 1, 1988

(7) Iowa and South Dakota:

(i) FM translators, February 1, 1991

(ii) LPTV and TV translators, February 1, 1989

(8) Minnesota and North Dakota:

(i) FM translators, April 1, 1991

(ii) LPTV and TV translators, April 1, 1989

(9) Wyoming:

(i) FM translators, June 1, 1991

(ii) LPTV and TV translators, June 1, 1989

(10) Montana:

(i) FM translators, August 1, 1991

(ii) LPTV and TV translators, August 1, 1989

(11) Idaho:

(i) FM translators, October 1, 1988

(ii) LPTV and TV translators, October 1, 1991

(12) Washington:

(i) FM translators, December 1, 1988

(ii) LPTV and TV translators, December 1, 1991

(13) Oregon:

(i) FM translators, February 1, 1989

(ii) LPTV and TV translators, February 1, 1992

(14) Alaska, American Samoa, Guam, Mariana Islands and Hawaii:

(i) FM translators, April 1, 1989

(ii) LPTV and TV translators, April 1, 1992

(15) Colorado:

(i) FM translators, June 1, 1989

(ii) LPTV and TV translators, June 1, 1992

(16) New Mexico:

(i) FM translators, August 1, 1989

(ii) LPTV and TV translators, August 1, 1987

(17) Utah:

(i) FM translators, October 1, 1989

(ii) LPTV and TV translators, October 1, 1987

(18) Arizona:

(i) FM translators, December 1, 1989

(ii) LPTV and TV translators, December 1, 1987

(e) Licenses for instructional tele sion fixed stations will be issued for period of 10 years beginning with t date of grant. An application for r newal of license (FCC Form 330- shall be filed not later than the fi day of the fourth full calendar mon prior to the expiration date of the cense sought to be renewed. If the pr scribed deadline falls on a nonbusine day, the cutoff shall be the close business of the first full business d thereafter.

(f) Licenses held by broadcast ne work-entities under Subpart F will issued for a period of 5 years begi ning with the date of grant. An appl cation for renewal of license (FC Form 313-R) shall be filed not late than the first day of the fourth fu calendar month prior to the expira tion date of the license sought to b renewed. If the prescribed deadlin falls on a nonbusiness day, the cutof shall be the close of business of th first full business day thereafter.

(Secs. 4, 5, 303, 48 Stat., as amended, 10 1068, 1082 (47 U.S.C. 154, 155, 303))

[28 FR 13706, Dec. 14, 1963, as amended 45 FR 28142, Apr. 28, 1980; 49 FR 325 Aug. 15, 1984; 50 FR 26758, June 28, 1985; FR 7142, Mar. 9, 1987; 52 FR 25604, July 1987; 52 FR 31402, Aug. 20, 1987]

§ 74.16 Temporary extension of station licenses.

Where there is pending before the Commission any application, investigation, or proceeding which, after hearing, might lead to or make necessary the modification of, revocation of, or the refusal to renew an existing auxiliary or experimental broadcast station license or a television broadcast translator station license, the Commission in its discretion, may grant a temorary extension of such license: *Provided, however,* That no such temporary extension shall be construed as a finding by the Commission that the operation of any radio station thereunder will serve public interest, convenience, and necessity beyond the express terms of such temporary extension of license: *And provided further,* That such temporary extension of license will in no wise affect or limit the action of the

Commission with respect to any pending application or proceeding.

[28 FR 13706, Dec. 14, 1963, as amended at 37 FR 25843, Dec. 5, 1972]

§ 74.18 General operator requirements.

(a) Except where unattended transmitters are specifically permitted, an operator must be on duty and in charge of the transmitter at either the transmitter location or remote control location during operation.

(b) Except as noted in paragraph (e) of this section, stations authorized under the provisions of this part may be operated by any person designated by the station licensee.

(c) The transmitter duty operator may, at the discretion of the station licensee, be employed for other duties and for the operation of other transmitting stations if such other duties will not interfere with the proper operation of the station transmission systems.

(d) Except as noted in paragraph (e) of this section, the installation, adjustment, and maintenance of any transmitter licensed under the provisions of this Part may be performed by any person deemed qualified to perform such duties by the licensee.

(e) Persons who perform any operating or transmitter technical duties licensed under subparts A, G and L must hold a commercial radio operator license (any class, unless otherwise endorsed).

(Secs. 4, 303, 48 Stat., as amended, 1066, 1082; 47 U.S.C. 158, 303)

[46 FR 35464, July 8, 1981, as amended at 49 FR 20671, May 16, 1984; 49 FR 32583, Aug. 15, 1984]

§ 74.19 Special technical records.

The FCC may require a broadcast auxiliary station licensee to keep operating and maintenance records necessary to resolve conditions of actual or potential interference, rule violations, or deficient technical operation.

[48 FR 38482, Aug. 24, 1983]

§ 74.21 Broadcasting emergency information.

(a) In an emergency where normal communication facilities have been disrupted or destroyed by storms, floods or other disasters, the stations licensed under this part may be operated for the purpose of transmitting essential communications intended to alleviate distress, dispatch aid, assist in rescue operations, maintain order, or otherwise promote the safety of life and property. In the course of such operation, a station of any class may communicate with stations of other classes and in other services. However, such operation shall be conducted only on the frequency or frequencies for which the station is licensed and the used power shall not exceed the maximum authorized in the station license. When such operation involves the use of frequencies shared with other stations, licensees are expected to cooperate fully to avoid unnecessary or disruptive interference.

(b) Whenever such operation involves communications of a nature other than those for which the station is licensed to perform, the licensee shall, at the earliest practicable time, notify the FCC in Washington, DC of the nature of the emergency and the use to which the station is being put and shall subsequently notify the same offices when the emergency operation has been terminated.

(c) Emergency operation undertaken pursuant to the provisions of this section shall be discontinued as soon as substantially normal communications facilities have been restored. The Commission may at any time order discontinuance of such operation.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[28 FR 13706, Dec. 14, 1963, as amended at 37 FR 25843, Dec. 5, 1972; 44 FR 65765, Nov. 15, 1979; 47 FR 40175, Sept. 13, 1982]

§ 74.22 Use of common antenna structure.

The simultaneous use of a common antenna structure by more than one station authorized under this part, or by one or more such stations and one or more stations of any other service may be authorized, provided that each licensee or permittee using such structure shall be responsible for painting and lighting of the structure when obstruction marking is required by the FCC. However, each such licensee or permittee utilizing a common structure may designate one of the licensees or permittees as responsible for painting and lighting the structure. Such designated licensee or permittee shall be solely responsible for conforming to all FCC requirements of Part 17 of this Chapter regarding obstruction marking and lighting of antenna structures. (See §§ 17.47 through 17.56.) A copy of the agreement between the licensees or permittees must be retained in each licensee's or permittee's station file, available for inspection by FCC representatives. In the event of default by the designated licensee of his responsibility, each of the licensees or permittees shall again be individually responsible for conforming to the requirements of the rules, pending appointment of a new designated licensee responsible for conforming to these rules.

[47 FR 40172, Sept. 13, 1982]

§ 74.23 Interference jeopardizing safety of life or protection of property.

(a) The licensee of any station authorized under this part that causes harmful interference, as defined in § 2.1 of the Commission's rules, to radio communications involving the safety of life or protection of property shall promptly eliminate the interference.

(b) If harmful interference to radio communications involving the safety of life or protection of property cannot be promptly eliminated and the Commission finds that there exists an imminent danger to safety of life or protection of property, pursuant to 47 U.S.C. 312 (b) and (e) and 5 U.S.C. 558, operation of the offending equipment shall temporarily be suspended and shall not be resumed until the harmful interference has been eliminated or the threat to the safety of life or property has passed. In situations where the protection of property alone is jeopardized, before taking any action under this paragraph, the Commission shall balance the nature and extent of the possible property damage against the potential harm to a licensee or the public caused by suspending part 74 operations. When specifically authorized, short test operations may be made during the period of suspended operation to check th efficacy of remedial measures.

[47 FR 1395, Jan. 13, 1982]

§ 74.24 Short-term operation.

The classes of broadcast auxiliar stations provided for in subparts D, E F and H of this part may be operate on a short-term basis under the authority conveyed by a part 73 license without prior authorization from the FCC, subject to the following conditions:

(a) The part 73 licensee of this chapter must be eligible to operate the particular class of broadcast auxiliary station.

(b) The short-term broadcast auxiliary station shall be operated in conformance with all normally applicable regulations to the extent they are not superceded by specific provisions of this section.

(c) Short-term operation is on a secondary, non-interference basis to regularly authorized stations and shall be discontinued immediately upon notification that perceptible interference is being caused to the operation of a regularly authorized station. Short-term station operators shall, to the extent practicable, use only the effective radiated power and antenna height necessary for satisfactory system performance.

(d) Short-term operation by a part 73 licensee shall not exceed 720 hours annually per frequency.

NOTE: Certain frequencies shared with other services which are normally available for permanent broadcast auxiliary station assignment may not be available for short-term operation. Refer to any note(s) which may be applicable to the use of a specific frequency prior to initiating operation.

(e) The antenna height of a station operated pursuant to this section shall not increase the height of any man-made antenna supporting structure, or increase by more than 6.1 meters (2 feet) the height of any other type of man-made structure or natural formation. However, the facilities of an authorized broadcast auxiliary station belonging to another licensee may be operated in accordance with the terms of its outstanding authorization.

(f) Stations operated pursuant to this section shall be identified by the transmission of the call sign of the associated broadcast station.

(g) The part 73 licensee of this chapter, prior to operating pursuant to the provisions of this section shall, for the intended location or area-of-operation, notify the appropriate frequency coordination committee or any licensee(s) assigned the use of the proposed operating frequency, concerning the particulars of the intended operation and shall provide the name and telephone number of a person who may be contacted in the event of interference. Information on active frequency coordination committees may be obtained by contacting the FCC's Auxiliary Services Branch at (202) 634-6307 between 8:00 a.m. and 4:30 p.m. Eastern Time. Except as provided below, this notification provision shall not apply where an unanticipated need for immediate short-term mobile station operation would render compliance with the provisions of this paragraph impractical.

(1) A CARS licensee shall always be given advance notification prior to the commencement of short-term operation on or adjacent to an assigned frequency.

(h) Short-term operation is limited to areas south or west of the United States-Canada border as follows:

(1) Use of broadcast auxiliary service frequencies below 470 MHz is limited to areas of the United States south of Line A or west of Line C unless the effective radiated power of the station is 5 watts or less.

NOTE: Line A is a line above which frequency assignments made by the Federal Communications Commission are coordinated with the Canadian Department of Communications and which begins at Aberdeen, Washington, running by great circle arc to the intersection of 48° N., 120° W., then along parallel 48° N., to the intersection of 95° W., then by great circle arc through the southernmost point of Duluth, Minnesota, then by great circle arc to 45° N., 85° W., then southward along meridian 85° W., to its intersection with parallel 41° N., then along parallel 41° N., to its intersection with meridian 82° W., then by great circle arc through the southernmost point of Bangor, Maine, then by great circle arc through the southernmost point of Searsport, Maine, at which point it terminates. Line C is a line east of which frequency assignments are similarly coordinated and which begins at the intersection of 70° N., 144° W., then by great circle arc to the intersection of 60° N., 143° W., then by great circle arc so as to include all of the Alaskan Panhandle.

(2) A broadcast auxiliary service station operating on frequencies between 470 MHz and 1 GHz must be at least 56.3 kilometers (35 miles) south (or west, as appropriate of the United States-Canada border if the antenna looks within a 200° sector toward the border; or, the station must be at least 8.1 kilometers (5 miles) south (or west, as appropriate) if the antenna looks within a 160° sector away from the border. However, operation is not permitted in either of these two situations if the station would be within the coordination distance of a receiving earth station in Canada which uses the same frequency band. (The coordination distance is the distance, calculated for any station, according to Appendix 28 of the International Radio Regulations.)

(3) A broadcast auxiliary service station operating on frequencies above 1 GHz shall not be located within the coordination distance of a receiving earth station in Canada which uses the same frequency band. (The coordination distance is the distance, calculated for any station, according to Appendix 28 of the international Radio Regulations.)

(i) Short-term operation of a remote pickup broadcast base station, a remote pickup automatic relay station, an aural broadcast STL station, an aural broadcast intercity relay station, a TV STL station, a TV intercity relay station or a TV translator relay station in the National Radio Quiet Zone, the Table Mountain Radio Receiving Zone, or near FCC monitoring stations is subject to the same advance notification procedures applicable to regular applications as provided for in §§ 73.1030 and 74.12, except that inasmuch as short-term operation does not involve an application process, the provisions relating to agency objection procedures shall not apply. It shall simply be necessary for the part 73 licensee of this chapter to contact the potentially affected agency and obtain advance approval for the proposed short-term operation. Where protection to FCC monitoring stations is concerned, approval for short-term operation may be given by the local Engineer-in-Charge.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032: 47 U.S.C. 158, 303)

[47 FR 9219, Mar. 4, 1982, as amended at 49 FR 34356, Aug. 30, 1984; 50 FR 23709, June 5, 1985]

§ 74.28 Additional orders.

In case the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the FCC may make supplemental or additional orders in each case as may be deemed necessary.

[47 FR 53022, Nov. 24, 1982]

§ 74.30 Antenna structure, marking and lighting.

The provisions of part 17 of the FCC rules (Construction, Marking, and Lighting of Antenna Structures) require certain antenna structures to be painted and/or lighted in accordance with the provisions of §§ 17.47 through 17.56 of the FCC rules.

[47 FR 53022, Nov. 24, 1982]

Subpart A—Experimental Broadcast Stations

§ 74.101 Experimental broadcast station.

The term "experimental broadcast station" means a station licensed for experimental or developmental transmission of radio telephony, television, facsimile, or other types of telecommunication services intended for reception and use by the general public.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32583, Aug. 15, 1984]

§ 74.102 Uses of experimental broadcast stations.

A license for an experimental broadcast station will be issued for the purposes of carrying on research and experimentation for the development and advancement of new broadcast technology, equipment, systems or services which are more extensive or require other modes of transmission than can be accomplished by using a licensed broadcast station under an e perimental authorization (s § 73.1510).

(Secs. 4, 303, 48 Stat., as amended, 106 1032; 47 U.S.C. 158, 303)

[49 FR 32583, Aug. 15, 1984]

§ 74.103 Frequency assignment.

(a) Frequencies allocated to broa casting and the various categories o auxiliary stations, in the FCC's Tabl of Frequency Allocations (Part 2 o this chapter), may be assigned respe tively to experimental broadcast an experimental auxiliary stations.

(b) More than one frequency may b assigned upon a satisfactory showin of the need therefor.

(c) Frequencies best suited to the purpose of the experimentation and on which there appears to be the leas likelihood of interference to established stations shall be selected.

(d) In a case of important experimentation which cannot be feasibly conducted on frequencies allocated to broadcasting or the various categories of auxiliary stations, the FCC may authorize an experimental station of any class to operate on other frequencies upon a satisfactory showing of the need therefore and a showing that the proposed operation can be conducted without causing harmful interference to established services. However, experimental operation which looks toward the development of radio transmitting apparatus or the rendition of any type of regular service using such frequencies will not be authorized prior to a determination by the FCC that the development of such apparatus or the rendition of such service would serve the public interest.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[28 FR 13706, Dec. 14, 1963, as amended a 49 FR 32583, Aug. 15, 1984]

§ 74.112 Supplementary statement with application for construction permit.

A supplementary statement shall be filed with, and made a part of, each application for construction permit for any experimental broadcast station confirming the applicant's understanding:

(a) That all operation upon the frequency requested is for experimental purposes only.

(b) That the frequency requested may not be the best suited to the particular experimental work to be carried on.

(c) That the frequency requested need not be allocated for any service that may be developed as a result of the experimental operation.

(d) That any frequency which may be assigned is subject to change without advance notice or hearing.

(e) That any authorization issued pursuant to the application may be cancelled at any time without notice or hearing.

(f) That if approval of the experimental broadcast station may have a significant environmental impact, see § 1.1307 of this chapter, submission of an environmental assessment, under § 1.1311 of this chapter, and compliance with the Commission's environmental rules contained in part 1 of this chapter is required.

(Sec. 319, 48 Stat. 1089, as amended; 47 U.S.C. 319; secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[28 FR 13706, Dec. 14, 1963, as amended at 49 FR 32583, Aug. 15, 1984; 55 FR 20398, May 16, 1990]

§ 74.113 Supplementary reports with application for renewal of license.

(a) A report shall be filed with each application for renewal of experimental broadcast station license which shall include a statement of each of the following:

(1) Number of hours operated.

(2) Full data on research and experimentation conducted including the types of transmitting and studio equipment used and their mode of operation.

(3) Data on expense of research and operation during the period covered.

(4) Power employed, field intensity measurements and visual and aural observations and the types of instruments and receivers utilized to determine the station service area and the efficiency of the respective types of transmissions.

(5) Estimated degree of public participation in reception and the results of observations as to the effectiveness of types of transmission.

(6) Conclusions, tentative and final.

(7) Program of further developments in broadcasting.

(8) All developments and major changes in equipment.

(9) Any other pertinent developments.

(b) Special or progress reports shall be submitted from time to time as the Commission shall direct.

(Sec. 308, 48 Stat. 1084, as amended; 47 U.S.C. 308; secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[28 FR 13706, Dec. 14, 1963, as amended at 49 FR 32583, Aug. 15, 1984]

§ 74.131 Licensing requirements, necessary showing.

(a) An applicant for a new experimental broadcast station, change in facilities of any existing station, or modification of license is required to make a satisfactory showing of compliance with the general requirements of the Communications Act of 1934, as amended, as well as the following:

(1) That the applicant has a definite program of research and experimentation in the technical phases of broadcasting which indicates reasonable promise of substantial contribution to the developments of the broadcasting art.

(2) That upon the authorization of the proposed station the applicant can and will proceed immediately with its program of research and experimentation.

(3) That the transmission of signals by radio is essential to the proposed program of research and experimentation.

(4) That the program of research and experimentation will be conducted by qualified personnel.

(b) A license of an experimental broadcast station will not authorize exclusive use of any frequency. In case interference would be caused by simultaneous operation of stations licensed experimentally, such licensees shall endeavor to arrange satisfactory time division. If such agreement cannot be reached, the FCC will determine and specify the time division.

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(c) A license for an experimental broadcast station will be issued only on the condition that no objectionable interference to the regular program transmissions of broadcast stations will result from the transmissions of the experimental stations.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[28 FR 13706, Dec. 14, 1963, as amended at 49 FR 32583, Aug. 15, 1984]

§ 74.132 Power limitations.

The license for experimental broadcast stations will specify the maximum authorized power. The operating power shall not be greater than necessary to carry on the service and in no event more than 5 percent above the maximum power specified. Engineering standards have not been established for these stations. The efficiency factor for the last radio stage of transmitters employed will be subject to individual determination but shall be in general agreement with values normally employed for similar equipment operated within the frequency range authorized.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32583, Aug. 15, 1984]

§ 74.133 Emission authorized.

In case emission of a different type than that specified in the license is necessary or desirable in carrying on any phases of experimentation, application setting out fully the needs shall be made by informal application.

[28 FR 13706, Dec. 14, 1963]

§ 74.134 Multiple ownership.

No persons (including all persons under common control) shall control, directly or indirectly, two or more experimental broadcast stations unless a showing is made that the program of research requires a licensing of two or more separate stations.

[49 FR 32584, Aug. 15, 1984]

§ 74.151 Equipment changes.

The licensee of an experimental broadcast station may make any changes in the equipment that are deemed desirable or necessary provided:

(a) That the operating frequency is not permitted to deviate more than the allowed tolerance;

(b) That the emissions are not permitted outside the authorized band;

(c) That the power output complies with the license and the regulations governing the same; and

(d) That the transmitter as a whole or output power rating of the transmitter is not changed.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[28 FR 13706, Dec. 14, 1963, as amended at 49 FR 32584, Aug. 15, 1984]

TECHNICAL OPERATION AND OPERATORS

§ 74.161 Frequency tolerances.

The departure of the carrier frequency or frequencies of an experimental broadcast station must not exceed the tolerance specified in the instrument of authorization. For modes of transmission that do not have a resting or center carrier frequency, the occupied bandwidth of the station transmissions may not exceed that specified in the instrument of authorization.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32584, Aug. 15, 1984]

§ 74.162 Frequency monitors and measurements.

The licensee of an experimental broadcast station shall provide the necessary means for determining that the frequency of the station is within the allowed tolerance. The date and time of each frequency check, the frequency as measured, and a description or identification of the method employed shall be entered in the station log. Sufficient observations shall be made to insure that the assigned carrier frequency is maintained within the prescribed tolerance.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32584, Aug. 15, 1984]

§ 74.163 Time of operation.

(a) Unless specified or restricted hours of operation are shown in the station authorization, experimental broadcast stations may be operated at any time and are not required to adhere to a regular schedule of operation.

(b) The FCC may limit or restrict the periods of station operation in the event interference is caused to other broadcast or nonbroadcast stations.

(c) The FCC may require that an experimental broadcast station conduct such experiments as are deemed desirable and reasonable for development of the type of service for which the station was authorized.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32584, Aug. 15, 1984]

74.165 Station and operator licenses; posting of.

(a) The instrument of authorization or a clearly legible photocopy thereof, hall be available at the transmitter ite.

(b) Operators of an experimental broadcast transmitter must have their operators' licenses or permits available at their duty station when they are on duty.

52 FR 3806, Feb. 6, 1987]

74.181 Station records.

(a) The licensee of each experimen- al broadcast station must maintain dequate records of the operation, in- luding:

(1) Information concerning the ature of the experimental operation nd the periods in which it is being onducted.

(2) Information concerning any spe- fic data requested by the FCC.

(b) Station records must be retained r a period of two years.

ecs. 4, 303, 48 Stat., as amended, 1066, 32; 47 U.S.C. 158, 303)

9 FR 32584, Aug. 15, 1984]

4.182 Program service and charges.

(a) The licensee of an experimental oadcast station may transmit pro- am material only when necessary to e experiments being conducted, and no regular program service may be broadcast unless specifically authorized.

(b) The licensee of an experimental broadcast station may make no charges nor ask for any payment, directly or indirectly, for the production or transmission of any programming or information used for experimental broadcast purposes.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32584, Aug. 15, 1984]

§ 74.183 Station identification.

Each experimental broadcast station shall make aural or visual announcements of its call letters and location at the beginning and end of each period of operation, and at least once every hour during operation.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32584, Aug. 15, 1984]

§ 74.184 Rebroadcasts.

(a) The term "rebroadcast" means reception by radio of the programs or other transmissions of a broadcast station, and the simultaneous or subsequent retransmission of such programs or transmissions by a broadcast station.

(1) As used in this section, the word "program" includes any complete program or part thereof.

(2) The transmission of a program from its point of origin to a broadcast station entirely by common carrier facilities, whether by wire line or radio, is not considered a rebroadcast.

(3) The broadcasting of a program relayed by a remote broadcast pickup station is not considered a rebroadcast.

(b) No licensee of an experimental broadcast station may retransmit the program of another U.S. broadcast station without the express authority of the originating station. A copy of the written consent of the licensee originating the program must be kept by the licensee of the experimental broadcast station retransmitting such program and made available to the FCC upon request.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32584, Aug. 15, 1984]

Subparts B—C [Reserved]

Subpart D—Remote Pickup Broadcast Stations

§ 74.401 Definitions.

Associated broadcasting station(s). The broadcasting station or stations with which a remote pickup broadcast station or system is licensed as an auxiliary and with which it is principally used.

Authorized bandwidth. The occupied or necessary bandwidth, whichever is greater, authorized to be used by a station.

Automatic relay station. A remote pickup broadcast base station which is actuated by automatic means and is used to relay transmissions between remote pickup broadcast base and mobile stations, between remote pickup broadcast mobile stations and from remote pickup broadcast mobile stations to broadcasting stations. (Automatic operation is not operation by remote control.)

Carrier power. The average power at the output terminals of a transmitter (other than a transmitter having a suppressed, reduced or controlled carrier) during one radio frequency cycle under conditions of no modulation.

Mean power. The power at the output terminals of a transmitter during normal operation, averaged over a time sufficiently long compared with the period of the lowest frequency encountered in the modulation. A time of 1/10 second during which the mean power is greatest will be selected normally.

Necessary bandwidth. For a given class of emission, the minimum value of the occupied bandwidth sufficient to ensure the transmission of information at the rate and with the quality required for the system employed, under specified conditions. Emissions useful for the good functioning of the receiving equipment, as for example, the emission corresponding to the carrier of reduced carrier systems, shall be included in the necessary bandwidth.

Occupied bandwidth. The frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

Operational communications. Communications concerning the technical and programming operation of a broadcast station and its auxiliaries.

Remote control operation. Operation of a base station by a properly designated person on duty at a control position from which the transmitter is not visible but that position is equipped with suitable controls so that essential functions can be performed therefrom.

Remote pickup broadcast base station. A remote pickup broadcast station authorized for operation at a specified location.

Remote pickup broadcast mobile station. A remote pickup broadcast station authorized for use while in motion or during halts at unspecified locations. (As used in this subpart, mobile stations include hand-carried, pack-carried and other portable transmitters.)

Remote pickup broadcast stations. A term used in this subpart to include both remote pickup broadcast base stations and remote pickup broadcast mobile stations.

Remote pickup mobile repeater unit. A vehicular receiver-transmitter repeater used to provide extended communications range for a low-power hand-carried or pack-carried transmitter.

Station. As used in this subpart, each remote pickup broadcast transmitter, and its associated accessory equipment necessary to the radio communication function, constitutes a separate station.

Studio. Any room or series of rooms equipped for the regular production of broadcast programs of various kinds. A broadcasting booth at a stadium, convention hall, church, or other similar place is not considered to be a studio.

Systems. A complete remote pickup broadcast facility consisting of one or more mobile stations and/or one or more base stations authorized pursuant to a single license.

[41 FR 29686, July 19, 1976, as amended at 42 FR 14728, Mar. 16, 1977; 47 FR 283

June 30, 1982; 47 FR 54446, Dec. 3, 1982; 51 FR 4601, Feb. 6, 1986]

§ 74.402 Frequency assignment.

(a) The following frequencies may be assigned for use by remote broadcast pickup stations and broadcast network-entities. Frequencies between 450.025–450.975 and 455.025–455.975 MHz may also be assigned for use by cable network-entities.

(1) *Group A* (kHz): 1606,[1] 1622, 1646.

(2) *Group D* (MHz): 25.87,[2] 26.15, 26.25, 26.35.

Group E (MHz): 25.91,[2] 26.17, 26.27, 26.37.

Group F (MHz): 25.95;[2] 26.19; 26.29; 26.39.

Group G (MHz): 25.99;[2] 26.21; 26.31; 26.41.

Group H (MHz): 26.03;[2] 26.23; 26.33; 26.43.

(3) *Group I* (MHz): 26.07;[2] 26.11; 26.45.

Group J (MHz): 26.09;[2] 26.13; 26.47.

(4) *Group* K^{*}_{1} (MHz): 152.87[3], 152.93[3], 152.99[3], 153.05[3], 153.11[3], 153.17[3], 153.23[3], 153.29[3], 153.35[3].

Group K^{*}_{2} (MHz): 161.64[5]; 161.67[5]; 161.70[5]; 161.73[5]; 161.76[5].

(5) *Group L* (MHz): 166.25[4].

Group M (MHz): 170.15[4].

(6) *Group* N_1 (MHz): 450.050; 450.150; 450.250; 450.350; 450.450; 450.550; 455.050; 455.150; 455.250; 455.350; 455.450; 455.550.

Group N_2 (MHz): 450.0875; 450.1125; 450.1875; 450.2125; 450.2875; 450.3125; 450.3875; 450.4125; 450.4875; 450.5125; 450.5875; 450.6125; 455.0875; 455.1125; 455.1875; 455.2125; 455.2875; 455.3125; 455.3875; 455.4125; 455.4875; 455.5125; 455.5875; 455.6125.

(7) *Group P* (MHz): 450.01[6], 450.02[6]; 450.98[6]; 450.99[6]; 455.01[6]; 455.02[6]; 455.98[6]; 455.99[6].

(8) *Group R* (MHz): 450.650, 450.700, 450.750, 450.800, 450.850, 455.650, 455.700, 455.750, 455.800, 455.850.

Group S (MHz): 450.925, 455.925.

(b) The following frequencies are allocated for assignment to remote pickup broadcast stations in Puerto Rico and the Virgin Islands only:

160.89 MHz, 160.95 MHz, 160.01 MHz, 161.07 MHz, 161.13 MHz, 161.19 MHz, 161.25 MHz, 161.31 MHz, 161.37 MHz.

NOTE: These frequencies are shared with the Land Transportation Radio Service.

(c) For licensing purposes, a single system will consist of transmitters authorized to use the following combinations of frequency groups in a single area:

(1) Group A.

(2) One group from Groups D, E, F, G, or H; and/or either I or J.

(3) Groups K_1 and K_2, and/or either L or M.

(4) Groups N_1 and R.

(5) Group N_2.

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[1] Subject to the condition that no harmful interference is caused to the reception of standard broadcasting stations.

[2] Subject to the condition that no harmful interference is caused to stations in the broadcasting service.

[3] Subject to the condition that no harmful interference is caused to stations operating in accordance with the Table of Frequency Allocations set forth in Part 2 of the Commission's Rules and Regulations. Applications for licenses to use frequencies in this group must include statements showing what procedures will be taken to insure that interference will not be caused to stations in the industrial radio services.

[4] Operation on the frequencies 166.25 MHz and 170.15 MHz is not authorized (i) within the area bounded on the west by the Mississippi River, on the north by the parallel of latitude 37°30′ N., and on the east and south by the arc of the circle with center at Springfield, Ill., and radius equal to the airline distance between Springfield, Ill., and Montgomery, Alabama, subtended between the foregoing west and north boundaries; (ii) within 241.4 kilometers (150 miles) of New York City; and (iii) in Alaska or outside the continental United States; and is subject to the condition that no harmful interference is caused to government radio stations in the band 162–174 MHz.

[5] These frequencies may not be used by remote pickup stations in Puerto Rico or the Virgin Islands. In other areas, certain existing stations in the Public Safety and Land Transportation Radio Services have been permitted to continue operation on these frequencies on condition that no harmful interference is caused to remote pickup broadcast stations.

[6] The use of these frequencies is limited to operational communications, including tones for signalling and for remote control and automatic transmission system control and telemetry.

(6) Group P.

(7) Group S.

(d) License applicants shall request assignment of only those frequencies, both in number and channel bandwidth, necessary for satisfactory operation. A licensee may operate a remote pickup broadcast system only if the system is equipped to operate on all assigned frequencies. It is not necessary that each transmitter within a system be equipped to operate on all authorized system frequencies.

(e) Remote pickup broadcast stations or systems will not be granted exclusive frequency assignments. The same frequency or frequencies may be assigned to other licensees in the same area. Applicants for licenses should select the frequencies closest to the lower band edges within a group that will meet operational requirements to promote the orderly and efficient use of the allocated frequencies.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[41 FR 29686, July 19, 1976, as amended at 42 FR 2070, Jan. 10, 1977; 42 FR 14728, Mar. 16, 1977; 43 FR 14661, Apr. 7, 1978; 44 FR 65765, Nov. 15, 1979; 47 FR 24580, June 7, 1982; 50 FR 9036, Mar. 6, 1985; 50 FR 23709, June 5, 1985; 51 FR 4601, Feb. 6, 1986]

Effective Date Note: At 49 FR 45158, Nov. 15, 1984, § 74.402 was revised in its entirety. However the effective date for this revision is still pending. For the convenience of the reader, the revised version of § 74.402 is set forth below:

§ 74.402 Authorized frequencies.

Operation on all channels listed in this section (except: 26.07, 26.11, 26.45, 450.01, 450.02, 450.98, 450.99, 455.01, 455.02, 455.98, 455.99 MHz) shall be in accordance with the "priority of use" provisions in § 74.403(b). The channel will be assigned by its center frequency, channel bandwidth, and emission designator. The frequencies listed in this section represent the center of the channel or channel segment.

(a) The following channels (except 1606, 1622, and 1646 kHz) may be assigned for us by broadcast remote pickup stations using any emission (other than single sideband or pulse) that will be in accordance with the provisions of § 74.462. The channels 1606, 1622, and 1646 kHz are limited to A3E emission.

(1) MF Channels: 1606, 1622, and 1646 kHz; Maximum authorized channel bandwidth: 10 kHz; The channel 1606 kHz is subject to the condition listed in subparagraph (e)(1) of this Section.

(2) HF Channels: 25.87, 25.91, 25.95, 25.99, 26.03, 26.07, 26.09, 2.611, 26.13, 26.15, 26.17, 26.21, 26.23, 26.25, 26.27, 26.29, 26.31, 26.33, 26.35, 26.37, 26.39, 26.41, 26.43, 26.45, and 26.47 MHz; Maximum authorized channel bandwidth: 20 kHz, except the channels 25.87-26.03 MHz are 40 kHz; The channels 25.87-26.09 MHz are subject to the condition listed in subparagraph (e)(2) of this Section.

(3) VHF Channels: 166.25 and 170.15 MHz Maximum authorized channel bandwidth: 25 kHz; These channels are subject to the condition listed in subparagraph (e)(8) of this Section.

(4) UHF Channels: 450.01, 450.02, 450.98, 450.99, 455.01, 455.02, 455.98, 455.99 MHz Maximum authorized channel bandwidth: 10 kHz; These channels are subject to the condition listed in subparagraph (e)(9) of this Section.

(b) One or more of the following 5 kHz segments my be stacked to form a channel which may be assigned for use by broadcast remote pickup stations using any emission contained within the resultant channel in accordance with the provisions of § 74.462.

(1) VHF segments: 152.8575, 152.8625, 152.8675, 152.8725, 152.8775, 152.8825, 152.9175, 152.9225, 152.9275, 152.9325, 152.9375, 152.9425, 152.9775, 152.9825, 152.9875, 152.9925, 152.9975, 153.0025, 153.0375, 153.0425, 153.0475, 153.0525, 153.0575, 153.0625, 153.0975, 153.1025, 153.1075, 153.1125, 153.1175, 153.1225, 153.1575, 153.1625, 153.1675, 153.1725, 153.1775, 153.1825, 153.2175, 153.2225, 153.2275, 153.2325, 153.2375, 153.2425, 153.2775, 153.2825, 153.2875, 153.2925, 153.2975, 153.3025, 153.3375, 153.3425, 153.3475, 153.3525, 153.3575, and 153.3625 MHz; Maximum authorized channel bandwidth: 30 kHz; These channels are subject to the conditions listed in paragraphs (e)(3), (4), and (5) of this section.

(2) VHF segments: 160.8625, 160.8675, 160.8725, 160.8775, 160.8825, 160.8875, 160.8925, 160.8975, 160.9025, 160.9075, 160.9125, 160.9175, 160.9225, 160.9275, 160.9325, 160.9375, 160.9425, 160.9475, 160.9525, 160.9575, 160.9625, 160.9675, 160.9725, 160.9775, 160.9825, 160.9875, 160.9925, 160.9975, 161.0025, 161.0075, 161.0125, 161.0175, 161.0225, 161.0275, 161.0325, 161.0375, 161.0425, 161.0475, 161.0525, 161.0575, 161.0625, 161.0675, 161.0725, 161.0775, 161.0825, 161.0875, 161.0925, 161.0975, 161.1025, 161.1075, 161.1125, 161.1175, 161.1225, 161.1275, 161.1325, 161.1375, 161.1425, 161.1475, 161.1525, 161.1575, 161.1625, 161.1675, 161.1725, 161.1775, 161.1825, 161.1875, 161.1925, 161.1975, 161.2025, 161.2075, 161.2125, 161.2175, 161.2225, 161.2275, 161.2325, 161.2375, 161.2425, 161.2475,

161.2525, 161.2575, 161.2625, 161.2675, 161.2725, 161.2775, 161.2825, 161.2875, 161.2925, 161.2975, 161.3025, 161.3075, 161.3125, 161.3175, 161.3225, 161.3275, 161.3325, 161.3375, 161.3425, 161.3475, 161.3525, 161.3575, 161.3625, 161.3675, 161.3725, 161.3775, 161.3825, 161.3875, 161.3925, and 161.3975 MHz; Maximum authorized channel bandwidth: 30 kHz; These channels are subject to the condition listed in paragraph (e)(6) of this section.

(3) VHF segments: 161.6275, 161.6325, 161.6375, 161.6425, 161.6475, 161.6525, 161.6575, 161.6625, 161.6675, 161.6725, 161.6775, 161.6825, 161.6875, 161.6925, 161.6975, 161.7025, 161.7075, 161.7125, 161.7175, 161.7225, 161.7275, 161.7325, 161.7375, 161.7425, 161.7475, 161.7525, 161.7575, 161.7625, 161.7675, and 161.7725 MHz; Maximum authorized channel bandwidth: 30 kHz; These channels are subject to the conditions listed in paragraphs (e) (4) and (7) of this section.

(4) UHF segments: 450.0275, 450.0325, 450.0375, 450.0425, 450.0475, 450.0525, 450.0575, 450.0625, 450.0675, 450.0725, 450.0775, 450.0825, 450.0875, 450.0925, 450.0975, 450.1025, 450.1075, 450.1125, 450.1175, 450.1225, 450.1275, 450.1325, 450.1375, 450.1425, 450.1475, 450.1525, 450.1575, 450.1625, 450.1675, 450.1725, 450.1775, 450.1825, 450.1875, 450.1925, 450.1975, 450.2025, 450.2075, 450.2125, 450.2175, 450.2225, 450.2275, 450.2325, 450.2375, 450.2425, 450.2475, 450.2525, 450.2575, 450.2625, 450.2675, 450.2725, 450.2775, 450.2825, 450.2875, 450.2925, 450.2975, 450.3025, 450.3075, 450.3125, 450.3175, 450.3225, 450.3275, 450.3325, 450.3375, 450.3425, 450.3475, 450.3525, 450.3575, 450.3625, 450.3675, 450.3725, 450.3775, 450.3825, 450.3875, 450.3925, 450.3975, 450.4025, 450.4075, 450.4125, 450.4175, 450.4225, 450.4275, 450.4325, 450.4375, 450.4425, 450.4475, 450.4525, 450.4575, 450.4625, 450.4675, 450.4725, 450.4775, 450.4825, 450.4875, 450.4925, 450.4975, 450.5025, 450.5075, 450.5125, 450.5175, 450.5225, 450.5275, 450.5325, 450.5375, 450.5425, 450.5475, 450.5525, 450.5575, 450.5625, 450.5675, 450.5725, 450.5775, 450.5825, 450.5875, 450.5925, 450.5975, 450.6025, 450.6075, 450.6125, 450.6175, 450.6225, 455.0275, 455.0325, 455.0375, 455.0425, 455.0475, 455.0525, 455.0575, 455.0625, 455.0675, 455.0725, 455.0775, 455.0825, 455.0875, 455.0925, 455.0975, 455.1025, 455.1075, 455.1125, 55.1175, 455.1225, 455.1275, 455.1325, 55.1375, 455.1425, 455.1475, 455.1525, 55.1575, 455.1625, 455.1675, 455.1725, 55.1775, 455.1825, 455.1875, 455.1925, 55.1975, 455.2025, 455.2075, 455.2125, 55.2175, 455.2225, 455.2275, 455.2325, 55.2375, 455.2425, 455.2475, 455.2525, 55.2575, 455.2625, 455.2675, 455.2725, 55.2775, 455.2825, 455.2875, 455.2925, 455.2975, 455.3025, 455.3075, 455.3125, 455.3175, 455.3225, 455.3275, 455.3325, 455.3375, 455.3425, 455.3475, 455.3525, 455.3575, 455.3625, 455.3675, 455.3725, 455.3775, 455.3825, 455.3875, 455.3925, 455.3975, 455.4025, 455.4075, 455.4125, 455.4175, 455.4225, 455.4275, 455.4325, 455.4375, 455.4425, 455.4475, 455.4525, 455.4575, 455.4625, 455.4675, 455.4725, 455.4775, 455.4825, 455.4875, 455.4925, 455.4975, 455.5025, 455.5075, 455.5125, 455.5175, 455.5225, 455.5275, 455.5325, 455.5375, 455.5425, 455.5475, 455.5525, 455.5575, 455.5625, 455.5675, 455.5725, 455.5775, 455.5825, 455.5875, 455.5925, 455.5975, 455.6025, 455.6075, 455.6125, 455.6175, 455.6225 MHz. Maximum authorized channel bandwidth: 50 kHz.

(c) One or two of the following 25 kHz segments may be stacked to form a channel which may be assigned for use by broadcast remote pickup stations using any emission contained within the resultant channel in accordance with the provisions of § 74.462. Users committed to 50 kHz bandwidths and transmitting program material will have primary use of these channels.

(1) UHF segments: 450.6375, 450.6625, 450.6875, 450.7125, 450.7375, 450.7625, 450.7875, 450.8125, 450.8375, 450.8625, 455.6375, 455.6625, 455.6875, 455.7125, 455.7375, 455.7625, 455.7875, 455.8125, 455.8375, 455.8625 MHz. Maximum authorized channel bandwidth: 50 kHz.

(d) One or two of the following 50 kHz segments may be stacked to form a channel which may be assigned for use by broadcast remote pickup stations using any emission contained within the resultant channel in accordance with the provisions of Section 74.462. Users committed to 100 kHz bandwidths and transmitting program material will have primary use of these channels.

(1) UHF segments: 450.900, 450.950, 455.900, and 455.950 MHz; Maximum authorized channel bandwidth: 100 kHz.

(e) Conditions on Broadcast Remote Pickup Service channel usage as referred to in subparagraphs (a) through (d) above:

(1) Operation is subject to the condition that no harmful interference is caused to the reception of AM broadcast stations.

(2) Operation is subject to the condition that no harmful interference is caused to stations in the broadcast service.

(3) Operation is subject to the condition that no harmful interference is caused to stations operating in accordance with the Table of Frequency Allocations set forth in Part 2 of the Commission's Rules and Regulations. Applications for licenses to use frequencies in this band must include statements showing what procedures will be taken to ensure that interference will not be caused to stations in the Industrial Radio Services.

(4) These frequencies will not be licensed to network entities.

(5) These frequencies will not be authorized to new stations for use on board aircraft.

(6) These frequencies are allocated for assignment to broadcast remote pickup stations in Puerto Rico or the Virgin Islands only.

NOTE: These frequencies are shared with Public Safety and Land Transportation Radio Services.

(7) These frequencies may not be used by broadcast remote pickup stations in Puerto Rico or the Virgin Islands. In other areas, certain existing stations in the Public Safety and Land Transportation Radio Services have been permitted to continue operation on these frequencies on condition that no harmful interference is caused to broadcast remote pickup stations.

(8) Operation on the frequencies 166.25 MHz and 170.15 MHz is not authorized: (i) Within the area bounded on the west by the Mississippi River, on the north by the parallel of latitude 37 degrees 30 minutes N., and radius equal to the air-line distance between Springfield, Ill., and Montgomery, Alabama, subtended between the foregoing west and north boundaries; (ii) Within 150 miles (241 KM) of New York City; and, (iii) In Alaska or outside the continental United States; and is subject to the condition that no harmful interference is caused radio stations in the band 162-174 MHz.

(9) The use of these frequencies is limited to operational communications, including tones for signaling and for remote control and automatic transmission system control and telemetry.

(f) License applicants shall request assignment of only those channels, both in number and bandwidth, necessary for satisfactory operation and for which the system is equipped to operate. However, it is not necessary that each transmitter within a system be equipped to operate on all frequencies authorized to that licensee.

(g) Remote pickup stations or systems will not be granted exclusive channel assignments. The same channel or channels may be assigned to other licensees in the same area. When such sharing is necessary, the provisions of § 74.403 shall apply.

(h) Each authorization for a new broadcast remote pickup station or system shall require the use of type accepted equipment.

[49 FR 45158, Nov. 15, 1984, as amended at 51 FR 32089, Sept. 9, 1986]

§ 74.403 Frequency selection to avoid interference.

(a) Where two or more remote pickup broadcast station licensees are authorized to operate on the same fr quency or group of frequencies in th same area and when simultaneous o eration is contemplated, the license shall endeavor to select frequencies (schedule operation in such manner a to avoid mutual interference. mutual agreement to this effe cannot be reached the Commissio shall be notified and it will specify th frequency or frequencies on whic each station is to be operated.

(b) The following order of priority o transmissions shall be observed on al frequencies except those listed i § 74.402 (a)(3), (a)(7) and (a)(8):

(1) Communications during an emergency or pending emergency directly related to the safety of life and property.

(2) Program material to be broadcast.

(3) Cues, orders, and other related communications immediately necessary to the accomplishment of a broadcast.

(4) Operational communications.

(5) Tests or drills to check the performance of stand-by or emergency circuits.

§ 74.431 Special rules applicable to remote pickup stations.

(a) Remote pickup mobile stations may be used for the transmission of material from the scene of events which occur outside the studio back to studio or production center. The transmitted material shall be intended for the licensee's own use and may be made available for use by any other broadcast station or cable system.

(b) Remote pickup mobile or base stations may be used for communications related to production and technical support of the remote program. This includes cues, orders, dispatch instructions, frequency coordination, establishing microwave links, and operational communications. Operational communications are alerting tones and special signals of short duration used for telemetry or control.

(c) Remote pickup mobile or base stations may communicate with any other station licensed under this subpart.

(d) Remote pickup mobile stations may be operated as a vehicular repeater to relay program material and communications between stations licensed under this subpart. Precautions shall be taken to avoid interference to other stations and the vehicular repeater shall only be activated by hand-carried or pack-carried units.

(e) The output of hand-carried or pack-carried transmitter units used with a vehicular repeater is limited to 2.5 watts. The output of a vehicular repeater transmitter used as a talkback unit on an additional frequency is limited to 2.5 watts.

(f) Remote pickup base and mobile stations in Alaska, Guam, Hawaii, Puerto Rico, and the Virgin Islands may be used for any purpose related to the programming or technical operation of a broadcasting station, except for transmission intended for direct reception by the general public.

(g) A broadcast licensee eligible for "short-term operation" under § 74.24, may operate RPU base or mobile stations under the authorization of the Part 73 license for an indefinite period upon filing an application for auxiliary operation with the Commission and subject to the conditions of § 74.24 (a), (b), (e), (f), (h), (i), and to the conditions set forth below:

(1) The auxiliary station is located within 50 miles (80 km) of the broadcast studio or broadcast transmitter.

(2) The applicant must coordinate the operation with all affected co-channel and adjacent channel licensees in the area of operation. This requirement can be satisfied by coordination with the local frequency committee if one exists.

(3) Such operation shall be suspended immediately upon notification from the Commission or by the Engineer in Charge (EIC) of the Commission's local field office, and shall not be resumed until specific authority is given by the Commission or EIC. When authorized by the EIC, short test operations may be made.

(4) Operation under this provision is not permitted between 152.87 MHz and 153.35 MHz.

(h) In the event that normal aural studio to transmitter circuits are damaged, stations licensed under Subpart D may be used to provide temporary circuits for a period not exceeding 30 days without further authority from the Commission necessary to continue broadcasting.

(i) Remote pickup mobile or base stations may be used for activities associated with the Emergency Broadcast System and similar emergency survival communications systems. Drills and tests are also permitted on these stations, but the priority requirements of § 74.403(b) must be observed in such cases.

[51 FR 4602, Feb. 6, 1986]

§ 74.432 Licensing requirements and procedures.

(a) A license for a remote pickup station will be issued to: the licensee of an AM, FM, noncommercial FM, TV, international broadcast or low power TV station; broadcast network-entity; or cable network-entity.

(b) Base stations may operate as automatic relay stations on the frequencies listed in § 74.402(a) (6) and (8) under the provisions of § 74.436, however, one licensee may not operate such stations on more than two frequencies in a single area.

(c) Base stations may use voice communications between the studio and transmitter or points of any intercity relay system on frequencies in Groups I and J.

(d) Base stations may be authorized to establish standby circuits from places where official broadcasts may be made during times of emergency and circuits to interconnect an emergency survival communications system.

(e) In Alaska, Guam, Hawaii, Puerto Rico, and the Virgin Islands, base stations may provide program circuits between the studio and transmitter or to relay programs between broadcasting stations. A base station may be operated unattended in accordance with the following:

(1) The station must be designed, installed, and protected so that the transmitter can only be activated or controlled by operators authorized by the licensee.

(2) The station must be equipped with circuits to prevent transmitter

operation when no signal is received from the station which it is relaying.

(f) Remote pickup stations may use only those frequencies and bandwidths which are necessary for operation.

(g) An application for a remote pickup broadcast station or system shall specify the broadcasting station or stations (where more than one broadcasting station is specified, all such broadcasting stations shall be licensed to the applicant and to the same community) with which the remote pickup broadcast facility is to be principally used and the licensed area of operation for a system which includes mobile stations shall be the area considered to be served by the associated broadcasting station or stations. Mobile stations may be operated outside the licensed area of operation pursuant to § 74.431(d). Where the applicant for remote pickup broadcast facilities is the licensee of more than one class of broadcasting station (AM, FM, TV), all licensed to the same community, designation of one or more such stations as the associated broadcasting station or stations will not preclude use of the remote pickup broadcast facilities with those broadcasting stations not included in the designation and such additional use shall be at the discretion of the licensee.

(h) In cases where a series of broadcasts are to be made from the same location, portable or mobile transmitters may be left at such location for the duration of the series of broadcasts: *Provided*, The transmitting apparatus is properly secured so that it may not be operated by unauthorized persons when unattended. Prior Commission authority shall be obtained for the installation of any transmitting antenna which requires notification to the FAA, pursuant to § 17.7 of the Commission's rules and regulations, and which will be in existence for more than 2 days.

(i) The location of each remote pickup broadcast base station will be specified in the station or system license and such stations may not be operated at any other location without prior authority of the Commission.

(j) The license shall be retained in the licensee's files at the address shown on the authorization, posted at the transmitter, or posted at the control point of the station.

(k) In the case of permanent discontinuance of operation of a station or system licensed under this subpart, the licensee shall forward the station or system license to the FCC in Washington, DC for cancellation. For purposes of this section, a station which is not operated for a period of one year is considered to have been permanently discontinued.

NOTE: Licensees of remote pickup broadcast stations licensed prior to August 31, 1976, should not file applications to consolidate individually licensed transmitters under a single system license until the renewal application of the associated broadcast station is filed. Applications filed between August 31, 1976, and the date of filing of the renewal applications to obtain authorization to use additional transmitters or modification of existing stations shall be restricted to a single system application necessary to accomplish the desired change, but may include consolidation of previously licensed transmitters within the system license. Applications submitted for system licensing prior to the time when renewal applications would normally be filed which are unnecessary for either administrative or operational purposes will be returned as unacceptable for filing.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[41 FR 29686, July 19, 1976, as amended at 42 FR 2071, Jan. 10, 1977; 47 FR 21496, May 18, 1982; 49 FR 14509, Apr. 12, 1984; 51 FR 4602, Feb. 6, 1986]

§ 74.433 Temporary authorizations.

(a) Special temporary authority may be granted for remote pickup station operation which cannot be conducted in accordance with § 74.24. Such authority will normally be granted only for operations of a temporary nature. Where operation is seen as likely on a continuing annual basis, an application for a regular authorization should be submitted.

(b) A request for special temporary authority for the operation of a remote pickup broadcast station may be made by informal application which shall be filed with the Commission at least 10 days prior to the date of the proposed operation: *Provided*, That, an application filed within less than 10 days of the proposed operation may be accepted upon a satisfactory showing of the reasons for the delay in submitting the request.

(c) An informal request for special temporary authority shall be addressed to the FCC in Washington, DC and must include full particulars including: licensee's name, call letters of associated broadcast station or stations, name and address of individual designated to receive return authorization, call letters of remote pickup station, if assigned, type and manufacturer of equipment, power output, emission, frequency or frequencies proposed to be used, commencement and termination date, location of proposed operation and purpose for which request is made including any particular justification. In the event that the proposed antenna installation will increase the height of any natural formation or existing man-made structure by more than 6.1 meters (20 feet), a vertical plan sketch showing the height above the ground of any existing structure, the elevation of the site above the mean sea level, and the geographical coordinates of the proposed site, shall be submitted with the application.

(d) A request for special temporary authority shall specify a frequency or frequencies consistent with the provisions of § 74.402: *Provided*, That, in the case of events of wide-spread interest and importance which cannot be transmitted successfully on these frequencies, frequencies assigned to other services may be requested upon a showing that operation thereon will not cause interference to established stations: *And provided further*, In no case will operation of a remote pickup broadcast station be authorized on frequencies employed for the safety of life and property.

(e) The user shall have full control over the transmitting equipment during the period it is operated.

(f) Special temporary authority to permit operation of remote pickup broadcast stations or systems pending Commission action on an application for regular authority will not normally be granted.

[41 FR 29686, July 19, 1976, as amended at 47 FR 9220, Mar. 4, 1982; 47 FR 55936, Dec. 14, 1982; 50 FR 23709, June 5, 1985]

§ 74.434 Remote control operation.

(a) A remote control system must provide adequate monitoring and control functions to permit proper operation of the station.

(b) A remote control system must be designed, installed, and protected so that the transmitter can only be activated or controlled by operators authorized by the licensee.

(c) A remote control system must prevent inadvertent transmitter operation caused by malfunctions in the circuits between the control point and transmitter.

[51 FR 4602, Feb. 6, 1986]

§ 74.436 Special requirements for automatic relay stations.

(a) An automatic relay station must be designed, installed, and protected so that the transmitter can only be activated or controlled by operators authorized by the licensee.

(b) An automatic relay station may accomplish retransmission of the incoming signals by either heterodyne frequency conversion or by modulating the transmitter with the demodulated incoming signals.

(c) An automatic relay station transmitter may relay the demodulated incoming signals from one or more receivers.

[51 FR 4602, Feb. 6, 1986]

§ 74.451 Type acceptance of equipment.

(a) Applications for new remote pickup broadcast stations or systems or for changing transmitting equipment of an existing station will not be accepted unless the transmitters to be used have been type accepted by the FCC pursuant to the provisions of this subpart, or have been type accepted for licensing under parts 21 or 90 of the FCC rules and do not exceed the output power limits specified in § 74.461(b).

(b) Any manufacturer of a transmitter to be used in this service may apply for type acceptance for such transmitter following the type acceptance procedure set forth in part 2 of the Commission's rules and regulations. Attention is also directed to part 1 of the Commission's rules and regulations which specifies the fees required when filing an application for type acceptance.

(c) An applicant for a remote pickup broadcast station or system may also apply for type acceptance for an individual transmitter by following the type acceptance procedure set forth in part 2 of the Commission's rules and regulations. Individual transmitters which are type accepted will not normally be included in the Commission's "Radio Equipment List."

(d) All transmitters marketed for use under this subpart shall be type accepted by the Federal Communications Commission. (Refer to subpart J of part 2 of the Commission's Rules and Regulations.)

(e) Remote pickup broadcast station equipment authorized to be used pursuant to an application accepted for filing prior to December 1, 1977, may continue to be used by the licensee or its successors or assignees: *Provided, however,* If operation of such equipment causes harmful interference due to its failure to comply with the technical standards set forth in this subpart, the Commission may, at its discretion, require the licensee to take such corrective action as is necessary to eliminate the interference.

(f) Each instrument of authority which permits operation of a remote pickup broadcast station or system using equipment which has not been type accepted will specify the particular transmitting equipment which the licensee is authorized to use.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[41 FR 29686, July 19, 1976, as amended at 42 FR 14728, Mar. 16, 1977; 42 FR 43636, Aug. 30, 1977; 43 FR 14661, Apr. 7, 1978; 45 FR 28142, Apr. 28, 1980]

§ 74.452 Equipment changes.

(a) Prior Commission approval is required for any change in the overall height of an antenna structure, except where notice to the Federal Aviation Administration is specifically not required under § 17.14(b) of the Commission's rules and regulations.

(b) The licensee of a remote pickup broadcast station may, except as set forth in paragraph (d) of this section, make any other changes in the equipment that are deemed desirable or necessary, including replacement with type accepted equipment, without prior Commission approval: *Provided,* The proposed changes will not depart from any of the terms of the station or system authorization or the Commission's technical rules governing this service: *And provided further,* That any changes made to type accepted transmitting equipment shall be in compliance with the provisions of Part 2 of the Commission's rules and regulations concerning modification to type accepted equipment.

(c) The FCC in Washington, DC shall be promptly notified of any equipment changes made pursuant to paragraph (b) of this section.

(d) All transmitters initially installed after November 30, 1977, must be type accepted for use in this service or other services as specified in § 74.451(a).

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[41 FR 29686, July 19, 1976, as amended at 42 FR 14728, Mar. 16, 1977; 42 FR 43636, Aug. 30, 1977; 43 FR 14662, Apr. 7, 1978; 47 FR 54448, Dec. 3, 1982]

§ 74.461 Transmitter power.

(a) Transmitter power is the power at the transmitter output terminals and delivered to the antenna, antenna transmission line, or any other impedance-matched, radio frequency load. For the purpose of this Subpart, the transmitter power is the carrier power.

(b) The authorized transmitter power for a remote pickup broadcast station shall be limited to that necessary for satisfactory service and, in any event, shall not be greater than 100 watts, except that a station to be operated aboard an aircraft shall normally be limited to a maximum authorized power of 15 watts. Specific authorization to operate stations on board aircraft with an output power exceeding 15 watts will be issued only upon an adequate engineering showing of need, and of the procedures that will be taken to avoid harmful interference to other licensees.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[41 FR 29686, July 19, 1976, as amended at 43 FR 14662, Apr. 7, 1978]

§ 74.462 Authorized bandwidth and emissions.

(a) Each authorization for a new remote pickup broadcast station or system issued pursuant to an application accepted after (one year following the effective date of these rules) shall require the use of type accepted equipment and such equipment shall be operated in accordance with emission specifications included in the type acceptance grant and as prescribed in paragraphs (b), (c), and (d) of this section.

(b) The maximum authorized bandwidth of emissions corresponding to the types of emissions specified below, and the maximum authorized frequency deviation in the case of frequency or phase modulated emission, shall be as follows:

Frequencies (megahertz)	Authorized bandwidth (Kilohertz)	Maximum frequency deviation [1] (Kilohertz)	Type of emission [2] [3]
25.87 to 26.03	40	10	A3, F3, F9
26.07 to 26.47	20	5	A3, F3, F9
152.87 to 153.35 [4]	30/60	5/10	A3, F3, F9
160.89 to 161.37	60	10	A1, A2, A3, F1, F2, F3, F9
161.64 to 161.76	30	5	A1, A2, A3, F1, F2, F3, F9
166.25 to 170.15	25	5	A1, A2, A3, F1, F2, F3, F9
450.01 to 455.99 (10 kHz channels)	10	1.5	A1, A2, A3, F1, F2, F3, F9
450.0875 to 455.6125 (25 kHz channels)	25	5	A1, A2, A3, F1, F2, F3, F9
450.05 to 455.85 (50 kHz channels)	50	10	A1, A2, A3, F1, F2, F3, F9
450.925 and 455.925 (100 kHz channels)	100	35	A1, A2, A3, F1, F2, F3, F9

[1] Applies where class F1, F2, F3, or F9 emission is used.

[2] Stations operating above 450 MHz shall show a need for employing A1, A2, F1, or F2 emission.

[3] Emission designators shall be established in accordance with provisions of subpt. C of pt. 2 of the Commission's rules and regulations. For transmitting equipment which is type accepted, emission designators will appear in the Commission's radio equipment list.

[4] New or modified licenses for use of the frequencies will not be granted to utilize transmitters on board aircraft, or to use a bandwidth in excess of 30 kHz and maximum deviation exceeding 5 kHz.

(c) The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

(1) On any frequency removed from the assignment frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: at least 25 dB:

(2) On any frequency removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: at least 35 dB;

(3) On any frequency removed from the assigned frequency by more than 250 percent on the authorized bandwidth; at least 43 plus 10 $\log_{10}$ (mean output power, in watts) dB.

(d) In the event a station's emissions outside its authorized channel cause harmful interference, the Commission may, at its discretion, require the licensee to take such further steps as may be necessary to eliminate the interference.

(e) The maximum authorized bandwidth for stations operating on 1606, 1622, or 1646 kHz shall be 10 kHz and operations on these frequencies shall be limited to A3 emission only.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[41 FR 29686, July 19, 1976, as amended at 41 FR 32429, Aug. 3, 1976; 41 FR 35068, Aug. 19, 1976; 43 FR 14662, Apr. 7, 1978; 43 FR 38391, Aug. 28, 1978; 44 FR 65765, Nov. 15, 1979]

§ 74.463 Modulation requirements.

(a) Each new remote pickup broadcast station authorized to operate with a power output in excess of 3 watts shall be equipped with a device which will automatically prevent modulation in excess of the limits set forth in this subpart.

(b) If amplitude modulation is employed, modulation shall not exceed 100 percent on negative peaks.

(c) If frequency modulation is employed, emission shall conform to the requirements specified in § 74.462.

[41 FR 29686, July 19, 1976, as amended at 47 FR 54448, Dec. 3, 1982]

§ 74.464 Frequency tolerance.

The licensee of a remote pickup broadcast station or system shall maintain the operating frequency of each such station in accordance with the following:

Frequency range	Tolerance (percent)	
	Base station	Mobile station
1.6 to 2 MHz:		
200 W or less	0.01	0.02
Over 200 W [1]	.005	.02
25 to 30 MHz:		
3 W or less	.002	.005
Over 3 W	.002	.002
30 to 300 MHz:		
3 W or less	.0005	.005
Over 3 W	.0005	.0005
300 to 500 MHz, all powers	.00025	.0005

[1] The listing of tolerances for power over 200 W is in accordance with treaty values and shall not be construed as a finding that such power will be authorized.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[41 FR 29686, July 19, 1976, as amended at 42 FR 2071, Jan. 10, 1977; 43 FR 38391, Aug. 28, 1978; 44 FR 65765, Nov. 15, 1979]

§ 74.465 Frequency monitors and measurements.

The licensee of a remote pickup station or system shall provide the necessary means to assure that all operating frequencies are maintained within the allowed tolerances.

[51 FR 4603, Feb. 6, 1986]

§ 74.482 Station identification.

(a) Each remote pickup broadcast station shall be identified by the transmission of the assigned station or system call sign, or by the call sign of the associated broadcast station. For systems, the licensee (including a part 73-only licensee where operation takes place pursuant to § 74.24) shall assign a unit designator to each station in the system. The call sign (and unit designator, where appropriate) shall be transmitted at the beginning and end of each period of operation. A period of operation may consist of a single continuous transmission, or a series of intermittent transmissions pertaining to a single event.

(b) In cases where a period of operation is of more than one hour duration identification of remote pickup broadcast stations participating in the operation shall be made at approximately one-hour intervals. Identification transmissions during operation need not be made when to make such transmissions would interrupt a single consecutive speech, play, religious service, symphony, concert, or any type of production. In such cases, the identification transmissions shall be made at the first interruption in the program continuity and at the conclusion thereof. Hourly identification may be accomplished either by transmission of the station or system call sign and unit designator assigned to the individual station or identification of an associated broadcasting station or network with which the remote pickup broadcast station is being used.

(c) In cases where an automatic relay station is a part of the circuit, the call sign of the relay transmitter may be transmitted automatically by the relay transmitter or by the remote pickup broadcast base or mobile station that actuates the automatic relay station.

(d) Automatically activated equipment may be used to transmit station identification in International Morse Code, provided that the modulation tone is 1200 Hz±800 Hz, the level of modulation of the identification signal is maintained at 40%±10%, and that the code transmission rate is maintained between 20 and 25 words per minute.

[41 FR 29686, July 19, 1976, as amended at 47 FR 9220, Mar. 4, 1982; 52 FR 47569, Dec. 15, 1987]

Subpart E—Aural Broadcast Auxiliary Stations

§ 74.501 Classes of aural broadcast auxiliary stations.

(a) *Aural broadcast STL station.* A fixed station for the transmission of aural program material between the studio and the transmitter of a broadcasting station other than an international broadcasting station.

(b) *Aural broadcast intercity relay (ICR) station.* A fixed station for the transmission of aural program material between broadcasting stations other than international broadcasting stations, and between FM radio broadcast stations and their co-owned FM booster stations, or other purposes as authorized in § 74.531.

(c) *Aural broadcast microwave booster station.* A fixed station in the broadcast auxiliary service that receives and amplifies signals of an aural broadcast STL or intercity relay station and retransmits them on the same frequency.

[28 FR 13716, Dec. 14, 1963, as amended at 49 FR 7129, Feb. 27, 1984; 53 FR 4169, Feb. 12, 1988]

§ 74.502 Frequency assignment.

(a) Except as provided in US 302, broadcast auxiliary stations licensed as of November 21, 1984, to operate in the band 942–944 MHz[1] may continue to operate on a co-equal primary basis to other stations and services operating in the band in accordance with the Table of Frequency Allocations. These stations will be protected from possible interference caused by new users of the band by the technical standards specified in § 94.63(d)(3).

(b) The frequency band 944–952 MHz is available for assignment to aural STL and ICR stations. AM and FM broadcast stations shall have primary use of the band; however, TV broadcast stations may be licensed on a secondary, noninterference basis. One or more of the following 25 kHz segments may be stacked to form a channel which may be assigned with a maximum authorized bandwidth of 300 kHz except as noted below. The channel, will be assigned by its center frequency, channel bandwidth, and emission designator. The following frequencies are the centers of each segment:

944.0125, 944.0375, 944.0625, 944.0875,
944.1125, 944.1375, 944.1625, 944.1875,
944.2125, 944.2375, 944.2625, 944.2875,
944.3125, 944.3375, 944.3625, 944.3875,
944.4125, 944.4375, 944.4625, 944.4875,
944.5125, 944.5375, 944.5625, 944.5875,
944.6125, 944.6375, 944.6625, 944.6875,
944.7125, 944.7375, 944.7625, 944.7875,
944.8125, 944.8375, 944.8625, 944.8875,
944.9125, 944.9375, 944.9625, 944.9875,
945.0125, 945.0375, 945.0625, 945.0875,
945.1125, 945.1375, 945.1625, 945.1875,
945.2125, 945.2375, 945.2625, 945.2875,
945.3125, 945.3375, 945.3625, 945.3875,
945.4125, 945.4375, 945.4625, 945.4875,
945.5125, 945.5375, 945.5625, 945.5875,
945.6125, 945.6375, 945.6625, 945.6875,
945.7125, 945.7375, 945.7625, 945.7875,
945.8125, 945.8375, 945.8625, 945.8875,
945.9125, 945.9375, 945.9625, 945.9875,
946.0125, 946.0375, 946.0625, 946.0875,
946.1125, 946.1375, 946.1625, 946.1875,
946.2125, 946.2375, 946.2625, 946.2875,
946.3125, 946.3375, 946.3625, 946.3875,
946.4125, 946.4375, 946.4625, 946.4875,
946.5125, 946.5375, 946.5625, 946.5875,
946.6125, 946.6375, 946.6625, 946.6875,
946.7125, 946.7375, 946.7625, 946.7875,
946.8125, 946.8375, 946.8625, 946.8875,
946.9125, 946.9375, 946.9625, 946.9875,
947.0125, 947.0375, 947.0625, 947.0875,
947.1125, 947.1375, 947.1625, 947.1875,
947.2125, 947.2375, 947.2625, 947.2875,
947.3125, 947.3375, 947.3625, 947.3875,
947.4125, 947.4375, 947.4625, 947.4875,
947.5125, 947.5375, 947.5625, 947.5875,
947.6125, 947.6375, 947.6625, 947.6875,
947.7125, 947.7375, 947.7625, 947.7875,
947.8125, 947.8375, 947.8625, 947.8875,
947.9125, 947.9375, 947.9625, 947.9875,
948.0125, 948.0375, 948.0625, 948.0875,
948.1125, 948.1375, 948.1625, 948.1875,
948.2125, 948.2375, 948.2625, 948.2875,
948.3125, 948.3375, 948.3625, 948.3875,
948.4125, 948.4375, 948.4625, 948.4875,
948.5125, 948.5375, 948.5625, 948.5875,
948.6125, 948.6375, 948.6625, 948.6875,
948.7125, 948.7375, 948.7625, 948.7875,
948.8125, 948.8375, 948.8625, 948.8875,
948.9125, 948.9375, 948.9625, 948.9875,
949.0125, 949.0375, 949.0625, 949.0875,
949.1125, 949.1375, 949.1625, 949.1875,
949.2125, 949.2375, 949.2625, 949.2875,
949.3125, 949.3375, 949.3625, 949.3875,
949.4125, 949.4375, 949.4625, 949.4875,
949.5125, 949.5375, 949.5625, 949.5875,
949.6125, 949.6375, 949.6625, 949.6875,
949.7125, 949.7375, 949.7625, 949.7875,
949.8125, 949.8375, 949.8625, 949.8875,
949.9125, 949.9375, 949.9625, 949.9875,
950.0125, 950.0375, 950.0625, 950.0875,
950.1125, 950.1375, 950.1625, 950.1875,
950.2125, 950.2375, 950.2625, 950.2875,
950.3125, 950.3375, 950.3625, 950.3875,
950.4125, 950.4375, 950.4625, 950.4875,
950.5125, 950.5375, 950.5625, 950.5875,
950.6125, 950.6375, 950.6625, 950.6875,
950.7125, 950.7375, 950.7625, 950.7875,
950.8125, 950.8375, 950.8625, 950.8875,
950.9125, 950.9375, 950.9625, 950.9875,
951.0125, 951.0375, 951.0625, 951.0875,
951.1125, 951.1375, 951.1625, 951.1875,
951.2125, 951.2375, 951.2625, 951.2875,

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[1] NOTE: In addition to this band, stations in Puerto Rico may continue to be authorized on 942.5, 943.0, 943.5, 944.0 MHz in the band 942-944 MHz on a primary basis to stations and services operating in accordance with the Table of Frequency Allocations.

951.3125, 951.3375, 951.3625, 951.3875,
951.4125, 951.4375, 951.4625, 951.4875,
951.5125, 951.5375, 951.5625, 951.5875,
951.6125, 951.6375, 951.6325, 951.6875,
951.7125, 951.7375, 951.7625, 951.7875,
951.8125, 951.8375, 951.8625, 951.8875,
951.9125, 951.9375, 951.9625, 951.9875.

(1) A single broadcast station may be authorized up to a maximum of twenty segments (500 kHz total bandwidth) for transmission of program material between a single origin and one or more designations. The station may lease excess capacity for broadcast and other uses on a secondary basis, subject to availability of spectrum for broadcast use. However, an FM station licensed for twelve or fewer segments (300 kHz total bandwidth) or an AM station licensed for eight or fewer segments (200 kHz total bandwidth) may lease excess capacity for broadcast and other uses on a primary basis.

(2) An applicant (new or modification of existing license) may assume the cost of replacement of one or more existing licensees equipment with narrowband equipment of comparable capabilities and quality in order to make available spectrum for its facilities. Existing licensees must accept such replacement without cost to them except upon a showing that the replacement equipment does not meet the capability or quality requirements.

(c) The frequency bands 18,760-18,820 and 19,100-19,160 MHz are available for assignment to aural broadcast STL and intercity relay stations and are shared on a co-primary basis with other fixed services under Parts 21, 78 and 94 of the Commission's rules.

(1) 5 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
340 MHz Separation	
18762.5	19102.5
18767.5	19107.5
18772.5	19112.5
18777.5	19117.5
18782.5	19122.5
18787.5	19127.5
18792.5	19132.5
18797.5	19137.5
18802.5	19142.5
18807.5	19147.5
18812.5	19152.5
18817.5	19157.5

Applicants may use either a two-way link or one frequency of a frequency pair for a one-way link and shall coordinate proposed operations pursuant to the procedures required in § 21.100(d).

(2) [Reserved]

(d) [Reserved]

(e) The use of the frequencies listed in paragraph (b) of this section by aural broadcast intercity relay stations is subject to the condition that no harmful interference is caused to other classes of stations operating in accordance with the Table of Frequency Allocations contained in § 2.106 of this chapter.

[28 FR 13716, Dec. 14, 1963, as amended at 48 FR 50332, Nov. 1, 1983; 49 FR 37777, Sept. 26, 1984; 50 FR 4658, Feb. 1, 1985; 50 FR 7341, Feb. 22, 1985; 50 FR 34150, Aug. 23, 1985; 50 FR 48600, Nov. 26, 1985; 54 FR 10329, Mar. 13, 1989; 54 FR 24905, June 12, 1989; 54 FR 30043, July 18, 1989]

§ 74.503 Frequency selection.

(a) Each application for a new station or change in an existing station shall be specific with regard to frequency. In general, the lowest suitable frequency will be assigned which, on an engineering basis, will not cause harmful interference to other stations operating in accordance with existing frequency allocations.

(b) Where it appears that interference may result from the operation of a new station or a change in the facilities of an existing station, the Commission may require a showing that harmful interference will not be caused to existing stations or that if interference will be caused the need for the proposed service outweighs the loss of service due to the interference.

[28 FR 13716, Dec. 14, 1963]

§ 74.531 Permissible service.

(a) An aural broadcast STL station is authorized to transmit aural program material between the studio and transmitter location of a broadcasting station, except an international broadcasting station, for simultaneous or delayed broadcast.

(b) An aural broadcast intercity relay station is authorized to transmit aural program material between broadcasting stations, except international broadcasting stations, for simultaneous or delayed broadcast.

(c) An aural broadcast STL or intercity relay may be used to transmit material between an FM broadcast radio station and an FM booster station owned, operated, and controlled by the licensee of the originating FM radio station. This use shall not interfere with or otherwise preclude use of these broadcast auxiliary facilities by broadcast auxiliary stations transmitting aural programming between the studio and transmitter location of a broadcast station or between broadcast stations as provided in paragraphs (a) and (b) of this section.

(d) An aural broadcast microwave booster station is authorized to retransmit the signals of an aural broadcast STL or intercity relay station.

(e) Multiplexing of the STL or intercity relay transmitter may be employed to provide additional communication channels for the transmission of aural program material, news-wire teleprinter signals relaying news to be associated with main channel programming, operational communications, and material authorized to be transmitted over an FM station under a valid Subsidiary Communications Authorization (SCA). An aural broadcast STL or intercity relay station may not be operated solely for the transmission of operational, teleprinter or subsidiary communications. Operational communications include cues, orders, and other communications directly related to the operation of the broadcast station as well as special signals used for telemetry or the control of apparatus used in conjunction with the broadcasting operations.

(f) All program material, including subsidiary communications, transmitted over an aural broadcast STL or intercity relay station shall be intended for use by broadcast stations owned or under common control of the licensee or licensees of the STL or intercity relay station. Other broadcast stations may simultaneously utilize such program material with permission of the STL or intercity relay station licensee.

(g) In any case where multiplexing, is employed on an aural broadcast STL station for the simultaneous transmission of more than one aural channel, the STL transmitter must be capable of transmitting the multiple channels within the channel on which the STL station is authorized to operate and with adequate technical quality so that each broadcast station utilizing the circuit can meet the technical performance standards stipulated in the rules governing that class of broadcasting station. If multiplex operation is employed during the regular operation of the STL station, the additional circuits shall be in operation at the time that the required periodic performance measurements are made of the overall broadcasting system from the studio microphone input circuit to the broadcast transmitter output circuit.

[28 FR 13716, Dec. 14, 1963, as amended at 45 FR 51564, Aug. 4, 1980; 52 FR 31403, Aug. 20, 1987]

§ 74.532 Licensing requirements.

(a) An aural broadcast STL or intercity relay station will be licensed only to the licensee or licensees of broadcast stations other than international broadcast stations, and for use by broadcast stations or FM booster stations owned entirely by or under common control of the licensee or licensees.

(b) More than one aural broadcast STL or intercity relay station may be licensed to a single licensee upon a satisfactory showing that the additional stations are needed to provide different program circuits to more than one broadcast station, to provide program circuits from other studios, or to provide one or more intermediate relay stations over a path which cannot be covered with a single station due to terrain or distance.

(c) If more than one broadcast station or class of broadcast station is to be served by a single aural broadcast auxiliary station, this information must be stated in the application for construction permit or license.

(d) Licensees of aural broadcast STL and intercity relay stations may be authorized to operate one or more aural broadcast microwave booster stations for the purpose of relaying signals over a path that cannot be covered with a single station.

NOTE: Applications for aural broadcast microwave booster stations will not be accepted for filing prior to January 1, 1985.

(e) Each aural broadcast auxiliary station will be licensed at a specified transmitter location to communicate with a specified receiving location, and the direction of the main radiation lobe of the transmitting antenna will be a term of the station authorization.

(f) In case of permanent discontinuance of operation of a station licensed under this subpart, the licensee shall forward the station license to the FCC, Washington, DC, 20554, for cancellation. A station which is not operated for a period of one year is considered to have been permanently discontinued.

[28 FR 13716, Dec. 14, 1963, as amended at 49 FR 7129, Feb. 27, 1984; 49 FR 10930, Mar. 23, 1984; 52 FR 31403, Aug. 20, 1987]

§ 74.533 Remote control and unattended operation.

(a) Aural broadcast STL and intercity relay stations may be operated by remote control provided that such operation is conducted in accordance with the conditions listed below:

(1) The remote control system must provide adequate monitoring and control functions to permit proper operation of the station.

(2) The remote control system must be designed, installed, and protected so that the transmitter can only be activated or controlled by operators authorized by the licensee.

(3) The remote control system must prevent inadvertent transmitter operation due to malfunctions in circuits between the control point and transmitter.

(b) Aural broadcast auxiliary stations may be operated unattended subject to the following provisions:

(1) The transmitter shall be provided with adequate safeguards to prevent improper operation of the equipment.

(2) The transmitter installation shall be adequately protected against tampering by unauthorized persons.

(3) Whenever an unattended aural broadcast auxiliary station is used, appropriate observations must be made at the receiving end of the circuit as often as necessary to ensure proper station operation. However, an aural broadcast STL (and any aural broadcast microwave booster station) associated with a radio or TV broadcast station operated by remote control may be observed by monitoring the broadcast station's transmitted signal at the remote control or ATS monitoring point.

(c) The FCC may notify the licensee to cease or modify operation in the case of frequency usage disputes, interference or similar situations where such action appears to be in the public interest, convenience and necessity.

(Sec. 318, 48 Stat. 1089, as amended by sec. 1, 74 Stat. 363; 47 U.S.C. 318)

[28 FR 13716, Dec. 14, 1963, as amended at 47 FR 55936, Dec. 14, 1982; 49 FR 7130, Feb. 27, 1984; 50 FR 32417, Aug. 12, 1985; 50 FR 48599, Nov. 26, 1985]

§ 74.534 Power limitations.

(a) for operation in the 944-952 MHz band:

Aural broadcast STL and intercity relay stations will be licensed with a power output not in excess of that necessary to render satisfactory service. The license for these stations will specify the maximum authorized power. The operating power shall not be greater than necessary to carry on the service and in no event more than 5 percent above the maximum power specified. Engineering standards have not been established for these stations. The efficiency factor for the last radio stage of transmitters employed will be subject to individual determination but shall be in general agreement with values normally employed for similar equipment operated within the frequency range authorized.

(b) For stations operating in bands above 17.7 GHz, the transmitter output power shall be limited to that necessary to accomplish the function of the system. Further, the output power of a transmitter on any authorized frequency shall not exceed the following:

(1)

Frequency band (GHz)	Maximum transmitter output power (watts)[1]
17.7 to 19.7	10.0
31.0 to 31.3	0.05

[1] Peak envelope power.

(2)

Frequency band (GHz)	Maximum allowable EIRP (dBW)
17.7 to 18.6	+55.0
18.6 to 18.8	+35.0
18.8 to 19.7	+35.0
31.0 to 31.3	No limit

[50 FR 4658, Feb. 10, 1985, as amended at 50 FR 7341, Feb. 22, 1985]

§ 74.535 Emission and bandwidth.

(a) For frequency modulation, the mean power of emissions shall be attenuated below the mean transmitter power (P) in accordance with the following schedule:

(1) On any frequency removed from the assigned frequency by more than 50% and up to 100% of the authorized bandwidth: at least 25 dB.

(2) On any frequency removed from the assigned frequency by more than 100% and up to 150% of the authorized bandwidth: at least 35 dB.

(3) On any frequency removed from the assigned frequency by more than 150% of the authorized bandwidth: at least 43 + 10 Log(P) dB.

(b) For all emissions except frequency modulation, the peak power of emissions shall be attenuated below the peak envelope transmitter power (P) in accordance with the following schedule:

(1) On any frequency 500 Hz inside the channel edge up to and including 2500 Hz outside the same edge, the following formula will apply:

$$\text{Attenuation} = 29 \text{ Log} \left(\frac{25}{11} \left(D + 2.5 - \frac{W}{2} \right)^2 \right) \text{dB}$$

or 50 dB whichever is the lesser attenuation. Where: D is the displacement frequency (kHz) from the center of the authorized bandwidth; and W is the channel bandwidth (kHz).

(2) On any frequency removed from the channel edge by more than 2500 Hz: At least 43 + 10 Log (P) dB.

(c) In the event a station's emissions outside its authorized channel cause harmful interference, the Commission may require the licensee to take such further steps as may be necessary to eliminate the interference.

(d) For operation in the 18 GHz band: Aural broadcast STL, intercity relay stations and booster stations may be authorized to employ either digital or frequency modulation.

(e) For operation in the 18 GHz band: The mean power of emission shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

(1) When using frequency modulation:

(i) On any frequency removed from the assigned frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: At least 25 decibels;

(ii) On any frequency removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: At least 35 decibels;

(iii) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least $43 + 10 \log_{10}$ (mean output power in watts) decibels, or 80 decibels, whichever is the lesser attenuation.

(2) When using digital modulation:

(i) In any 1 MHz band, the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 250 percent of the authorized bandwidth: As specified by the following equation but in no event less than 11 decibels.

$$A = 11 + 0.4\,(P\text{-}50) + 10 \log_{10} B$$

Where:

A = Attenuation (in decibels) below the mean output power level.

P = Percent removed from the carrier frequency.

B = Authorized bandwidth in MHz.

[Attenuation greater than 56 decibels is not required.]

(ii) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least $43 + 10 \log_{10}$ (mean output power in watts) decibels, or 80 decibels, whichever is the lesser attenuation.

(f) For operation in the 18 GHz band: When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion require greater attenuation than specified above.

(g) The following limitations apply to the operation of aural broadcast microwave booster stations:

(1) The booster station must receive and amplify the signals of the originating station and retransmit them on the same frequency without significantly altering them in any way. The characteristics of the booster transmitter output signal shall meet the requirements applicable to the signal of the originating station.

(2) The licensee is responsible for correcting any condition of interference that results from the radiation of radio frequency energy outside the assigned channel. Upon notice by the FCC to the station licensee that interference is being caused, operation of the apparatus must be immediately suspended and may not be resumed until the interference has been eliminated or it can be demonstrated that the interference is not due to spurious emissions. However, short term test transmissions may be made during the period of suspended operation to determine the efficacy of remedial measures.

(3) In each instance where suspension of operation is required, the licensee must submit a full report to the FCC after operation is resumed. The report must contain details of the nature of the interference, the source of interfering signals, and the remedial steps taken to eliminate the interference.

[28 FR 13716, Dec. 14, 1963, as amended at 48 FR 50332, Nov. 1, 1983; 49 FR 7130, Feb. 27, 1984; 49 FR 37777, Sept. 26, 1984; 50 FR 48599, Nov. 26, 1985]

§ 74.536 Directional antenna required.

(a) Aural broadcast STL and ICR stations are required to use a directional antenna with the minimum beamwidth necessary, consistent with good engineering practice, to establish the link.

(b) An aural broadcast STL or intercity relay station operating in either the 18 or 31 GHz band shall employ transmitting and receiving antennas meeting the appropriate performance Standard A indicated below, subject to paragraph (c) of this section.

ANTENNA STANDARDS

Frequency (MHz)	Category	Maximum beamwidth to 3 dB points (included angle in degrees)	Minimum antenna gain (dBi)	Minimum radiation suppression to angle in degrees from centerline of main beam in decibels						
				5° to 10°	10° to 15°	15° to 20°	20° to 30°	30° to 100°	100° to 140°	14° t 18°
17,700 to 19,700	A	n/a	38.0	25	29	33	36	42	55	5
	B	n/a	38.0	20	24	28	32	35	36	3
31,000 to 31,300 [2]	NA	[1] 4.0	38.0							

[1] The minimum front-to-back ratio shall be 38 dBi.

[2] Mobile, except aeronautical mobile, stations need not comply with these standards.

Note: Stations must employ an antenna that meets the performance standards for category A, except that in areas not subject to frequency congestion antennas meeting standards for category B may be employed. Note, however, that the Commission may require the use of a high performance antenna where interference problems can be resolved by the use of such antennas.

(c) The Commission may require the replacement, at the licensee's expense, of any antenna or periscope antenna system of a permanent fixed station operating at 2500 MHz or higher which does not meet performance Standard A specified above upon a showing that said antenna causes or is likely to cause interference to (or receive interference from) any other authorized or proposed station whereas an antenna meeting performance Standard A is not likely to involve such interference.

[48 FR 50333, Nov. 1, 1983, as amended at 49 FR 7130, Feb. 27, 1984; 50 FR 48599, Nov. 26, 1985; 51 FR 19840, June 3, 1986]

§ 74.537 Temporary authorizations.

(a) Special temporary authority may be granted for aural broadcast STL or intercity relay station operation which cannot be conducted in accordance with § 74.24. Such authority will normally be granted only for operations of a temporary nature. Where operation is seen as likely on a continuing annual basis, an application for a regular authorization should be submitted.

(b) A request for special temporary authorization for the operation of an aural broadcast STL or intercity relay station may be made by informal application which shall be filed with the FCC at least 10 days prior to the date of the proposed operation. However, an application filed within less than 10 days of the proposed operation may be accepted upon a satisfactory showing of the reasons for the delay in submitting the request.

(c) An informal request for special temporary authorization shall be addressed to the FCC, Washington, DC 20554 and shall set forth full particulars including: licensee's name, call letters of the associated broadcast station(s), name and address of individual designated to receive the return authorization, call letters of the aural broadcast STL or intercity relay station, if assigned, type and manufacturer of equipment, power output, emission, frequency or frequencies proposed for use, commencement and termination date and location of the proposed operation, and purpose for which request is made including any particular justification. In the event that the proposed antenna installation will increase the height of any man-made antenna supporting structure, or increase by more than 6.1 meters (20 feet) the height of any other type of man-made structure or natural formation, a vertical plan sketch showing the height above ground of any existing structure, the elevation of the site above mean sea level, and the geopraphic coordinates of the proposed site, shall be submitted with the application.

(d) A request for special temporary authorization shall specify a frequency or frequencies consistent with the provisions of § 74.502. However, in the case of events of widespread interest and importance which cannot be transmitted successfully on these frequencies, frequencies assigned to other services may be requested upon a showing that operation thereon will not cause interference to established stations. In no case will operation of an aural broadcast STL or intercity relay station be authorized on frequencies employed for the safety of life or property.

(e) When the transmitting equipment utilized is not licensed to the user, the user shall nevertheless have full control over the use of the equipment during the period it is operated.

(f) Special temporary authorization to permit operation of aural broadcast STL or intercity relay stations or systems pending FCC action on an application for regular authority will normally not be granted.

[47 FR 9220, Mar. 4, 1982, as amended at 50 FR 23709, June 5, 1985]

§ 74.550 Equipment authorization.

Each authorization for aural broadcast STL, ICR, and booster stations shall require the use of notified or type accepted equipment, except that operation of 944-952 MHZ equipment which has not been approved under the equipment authorization program may continue until July 1, 1993, after which equipment must be approved. Requirements for obtaining a grant of equipment authorization are contained in subpart J of part 2 of the Rules. Equipment designed exclusively for fixed operation shall be authorized under notification procedure (see § 2.904(d) of this chapter).

[50 FR 48599, Nov. 26, 1985, as amended at 55 FR 3063, Jan. 30, 1990]

§ 74.551 Equipment changes.

(a) Prior Commission approval, upon appropriate application (FCC Form 313) therefor, is required for any of the following changes:

(1) A change in the ERP.

(2) A change in the operating frequency or channel bandwidth.

(3) A change in the location of the transmitter or transmitting antenna except when relocation of the transmitter is within the same building.

(4) Any change in the overall height of the antenna structure, except where notice to the Federal Aviation Administration is specifically not required under § 17.14(b) of this chapter.

(5) Any change in the direction of the main radiation lobe of the transmitting antenna.

(b) Other equipment changes not specifically referred to in this section may be made at the discretion of the licensee, provided that the FCC in Washington, DC is promptly notified in writing upon the completion of such changes, and that the changes are described in the notification. Where such changes include the installation of multiplex equipment to provide additional aural channels, the purpose for which these added channels will be used shall be stated.

[28 FR 13716, Dec. 14, 1963, as amended at 38 FR 6827, Mar. 13, 1973; 47 FR 54448, Dec. 3, 1982; 49 FR 7130, Feb. 27, 1984; 50 FR 48599, Nov. 26, 1985]

§ 74.561 Frequency tolerance.

In the bands above 944 MHz, the operating frequency of the transmitter shall be maintained in accordance with the following table:

Frequency band (MHz)	Tolerance as percentage of assigned frequency
944 to 952	0.005
17,700 to 19,700	0.003
31,000 to 31,300	0.03

[54 FR 30043, July 18, 1989]

§ 74.562 Frequency monitors and measurements.

The licensee shall ensure that the STL, ICR, TVP, or booster transmitter does not exceed the emission limitations of § 74.535. This may be accomplished by appropriate frequency measurement techniques and consideration of the transmitter emissions.

[50 FR 48599, Nov. 26, 1985]

§ 74.564 Posting of station licenses.

(a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted in the room in which the transmitter is located, provided that if the transmitter operator is located at a distance from the transmitter pursuant to § 74.533, the station license shall be posted at the operating position.

(b) Posting of the station license and any other instruments of authorization shall be done by affixing the licenses to the wall at the posting location, or by enclosing them in a binder or folder which is retained at the posting location so that the documents will be readily available and easily accessible.

[48 FR 24385, June 1, 1983]

§ 74.582 Station identification.

(a) Each aural broadcast STL or intercity relay station, when transmitting program material or information shall transmit station identification at the beginning and end of each period of operation, and hourly, as close to the hour as feasible, at a natural break in program offerings by one of the following means:

(1) Transmission of its own call sign by aural means or by automatic trans-

mission of international Morse telegraphy.

(2) Aural transmission of the call sign of the radio broadcast station with which it is licensed as an STL or intercity relay station.

(3) Aural transmission of the call sign of the radio broadcast station whose signals are being relayed, or, when programs are obtained directly from network lines and relayed, the network identification.

(b) Station identification transmissions during operation need not be made when to make such transmission would interrupt a single consecutive speech, play, religious service, symphony concert, or other such productions. In such cases, the identification transmission shall be made at the first interruption of the entertainment continuity and at the conclusion thereof.

(c) Where more than one aural broadcast STL or intercity relay station is employed in an integrated relay system, the station at the point of origination may originate the transmission of the call signs of all of the stations in the relay system.

(d) Aural broadcast microwave booster stations will be assigned individual call signs. However, station identification will be accomplished by the retransmission of identification as provided in paragraph (a) of this section.

(e) Voice transmissions shall normally be employed for station identification. However, other methods of station identification may be permitted or required by the Commission.

[28 FR 13716, Dec. 14, 1963, as amended at 42 FR 36830, July 18, 1977; 42 FR 38178, July 27, 1977; 45 FR 26067, Apr. 17, 1980; 49 FR 7130, Feb. 27, 1984]

Subpart F—Television Broadcast Auxiliary Stations

§ 74.600 Eligibility for license.

A license for a station in this subpart will be issued only to a television broadcast station, a television broadcast network-entity, a low power television station, or a television translator station.

[52 FR 7142, Mar. 9, 1987]

§ 74.601 Classes of TV broadcast auxiliary stations.

(a) *TV pickup stations.* A land mobile station used for the transmission of TV program material and related communications from scenes of events occurring at points removed from TV broadcast station studios to TV broadcast or low power TV stations or other purposes as authorized in § 74.631.

(b) *TV STL station (studio-transmitter link).* A fixed station used for the transmission of TV program material and related communications from the studio to the transmitter of a TV broadcast or low power TV station or other purposes as authorized in § 74.631.

(c) *TV relay station.* A fixed station used for transmission of TV program material and related communications for use by TV broadcast and low power TV stations or other purposes as authorized in § 74.631.

(d) *TV translator relay station.* A fixed station used for relaying programs and signals of TV broadcast stations to LPTV, TV translator, and to other communications facilities that the Commission may authorize or for other purposes as permitted by § 74.631.

(e) *TV broadcast licensee.* Licensees and permittees of both TV broadcast and low power TV stations, unless specifically otherwise indicated.

(f) *TV microwave booster station.* A fixed station in the TV broadcast auxiliary service that receives and amplifies signals of a TV pickup, TV STL, TV relay, or TV translator relay station and retransmits them on the same frequency.

[47 FR 21496, May 18, 1982, as amended at 48 FR 17091, Aug. 21, 1983; 49 FR 7130, Feb. 27, 1984]

§ 74.602 Frequency assignment.

(a) The following frequencies are available for assignment to television pickup, television STL, television relay and television translator relay stations. The band segments 17,700-18,580 and 19,260-19,700 MHz are available for broadcast auxiliary stations as described in paragraph (g) of this section. Additionally, the band

38.6-40.0 GHz is available for assignment without channel bandwidth limitation to TV pickup stations on a secondary basis to fixed stations. The band segment 6425-6525 MHz is available for broadcast auxiliary stations as described in paragraph (j) of this section. Broadcast network-entities may also use the 1990-2110, 6425-6525 and 6875-7125 MHz bands for mobile television pick-up only.

Band A MHz	Band B MHz	Band D[1] GHz			
		Group A channels		Group B channels	
		Designation	Channel boundaries	Designation	Channel boundaries
1990-2008		A01	12.700-12.725	B01	12.7125-12.7375
2008-2025		A02	12.725-12.750	B02	12.7375-12.7625
2025-2042		A03	12.750-12.775	B03	12.7265-12.7875
2042-2059		A04	12.775-12.800	B04	12.7875-12.8125
2059-2076	6875-6900	A05	12.800-12.825	B05	12.8125-12.8375
2076-2093	6900-6925	A06	12.825-12.850	B06	12.8375-12.8625
2093-2110	6925-6950	A07	12.850-12.875	B07	12.8625-12.8875
2450-2467	6950-6975	A08	12.875-12.900	B08	12.8875-12.9125
2467-2483.5	6975-7000	A09	12.900-12.925	B09	12.9125-12.9375
	7000-7025	A10	12.925-12.950	B10	12.9375-12.9625
	7025-7050	A11	12.950-12.975	B11	12.9625-12.9875
	7050-7075	A12	12.975-13.000	B12	12.9875-12.0125
	7075-7100	A13	13.000-13.025	B13	13.0125-13.0375
	7100-7125	A14	13.025-13.050	B14	13.0375-13.0625
		A15	13.050-13.075	B15	13.0625-13.0875
		A16	13.075-13.100	B16	13.0875-13.1125
		A17	13.100-13.125	B17	13.1125-13.1375
		A18	13.125-13.150	B18[2]	13.1375-13.1625
		A19[2]	13.150-13.175	B19[2]	13.1625-13.1875
		A20[2]	13.175-13.200	B20[2]	13.1875-13.2125
		A21	13.200-13.225	B21	13.2125-13.2375
		A22	13.225-13.250		

[1] For fixed stations using Band D Channels, applicants are encouraged to use alternate A and B channels such th adjacent R.F. carriers are spaced 12.5 MHz. As example, a fixed station, relaying several channels, would use A01, B01, A0 B02, A03, etc.

[2] The band 13.15-13.20 GHz is reserved exclusively for the assignment of Television Pickup and CARS Pickup stations co-equal basis within a 50 km radius of each of the 100 television markets delineated in Section 76.51. Fixed televis auxiliary stations licensed pursuant to applications accepted for filing before Sept. 1, 1979, may continue operation o channels in the 13.15-13.20 GHz band, subject to periodic license renewals.

(1) Frequencies shown above between 2450 and 2500 MHz in Band A are allocated to accommodate the incidental radiations of industrial, scientific, and medical (ISM) equipment, and stations operating therein must accept any interference that may be caused by the operation of such equipment. Frequencies between 2450 and 2500 MHz are also shared with other communication services and exclusive channel assignments will not be made, nor is the channeling shown above necessarily that which will be employed by such other services.

(2) The following notes to the Table of Frequency Allocations contained in § 2.106 apply to the shared use of the frequency bands shown above:

NG 123 Television pickup stations may be authorized to use frequencies in the band 38.6-40 GHz on a secondary basis to stations operating in the fixed services.

US90 In the band 2025-2120 MHz earth-to-space transmissions in the space research and earth exploration satellite services by Government and non-Government stations as specific locations may be authorized subject to such conditions as may be applied on a case-by-case basis.

US 111 In the band 1990-2120 MHz, Government space research earth station may be authorized to use specific frequencies at specific locations for earth-to-space transmissions. Such authorizations shall be secondary to non-Government use of this band and subject to such other conditions as may be applied on a case-by-case basis.

Corpus Christi, Tex.	27°39′ N., 097°23′ W.
Fairbanks, Alaska	64°59′ N, 147°53′ W.
Goldstone, Calif.	35°18′ N. 116°54′ W.
Greenbelt, Md.	39°00′ N, 076°50′ W.
Guam, Mariana Islands	13°19′ N, 144°44′ E
Kanai, Hawaii	22°08′ N, 159°40′ W.
Meritt Island, Fla.	28°29′ N, 080°35′ W.

Rosman, N.C., 35°12′ N, 082°52′ W.
Wallops Island, Va., 37°57′ N, 075°28′ W.

US219 In the band 2025-2120 MHz Government earth resources satellite earth stations in the Earth Exploration Satellite Service may be authorized to use the frequency 2106.4 MHz for earth-to-space transmission for tracking, telemetry, and telecommand at the sites listed below. Such transmissions shall not cause harmful interference to TV auxiliary stations.

US222 In the band 2025-2120 MHz, Geostationary Operational Environmental Satellite Earth stations in the Space Research and Earth Exploration Satellite Services may be authorized on a coequal basis to use the frequency band 2025-2035 MHz for earth-to-space transmissions for tracking, telemetry and telecommand at the sites listed below:

Wallops Island, Va., 37°50′48″ N, 75°27′33″ W.
Seattle, Wash., 47°34′15″ N, 122°33′10″ W.
Honolulu, Hawaii, 21°21′12″ N, 157°52′36″ W.

NG147 Stations in the broadcast auxiliary service and private radio services licensed as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, may continue to operate on a primary basis to the radiodetermination satellite service.

(b) Subject to the conditions of paragraph (a) of this section, frequency assignments will normally be made as requested, provided that the frequency selection provisions of § 74.604 have been followed and that the frequency requested will cause no interference to existing users in the area. The Commission reserves the right to assign frequencies other than those requested if, in its opinion, such action is warranted.

(c) Fixed link stations will be authorized to operate on one channel only.

(d) Community antenna relay stations may be assigned channels in Band D between 12,700 and 13,200 MHz subject to the condition that no harmful interference is caused to TV STL and TV relay stations authorized at the time of such grants. Similarly, new TV STL and TV relay stations must not cause harmful interference to community antenna relay stations authorized at the time of such grants. The use of channels between 12,700 and 13,200 MHz by TV pickup stations is subject to the condition that no harmful interference is caused to community antenna relay, TV STL and TV relay stations, except as provided for in § 74.602(a) Note 2. Band D channels are also shared with certain Private Operational Fixed Stations, see § 74.638.

(e) Communication common carriers in the Local Television Transmission Service (Part 21) may be assigned frequencies available to television broadcast station licensees and broadcast network—work entities for the purpose of providing service to television broadcast stations and broadcast network—entities, respectively.

(f) TV auxiliary stations licensed to low power TV stations and translator relay stations will be assigned on a secondary basis, i.e., subject to the condition that no harmful interference is caused to other TV auxiliary stations assigned to TV broadcast stations, or to community antenna relay stations (CARS) operating between 12,700 and 13,200 MHz. Auxiliary stations licensed to low power TV stations and translator relay stations must accept any interference caused by stations having primary use of TV auxiliary frequencies.

(g) The following frequencies are available for assignment to television STL, television relay stations and television translator relay stations. The provisions of Section 74.604 do not apply to the use of these frequencies. These frequencies are shared on a coequal basis with other stations in the fixed service (see Parts 21, 78 and 94). Applicants may use either a two-way link or one or both frequencies of a frequency pair for a one-way link and shall coordinate proposed operations pursuant to procedures required in § 21.100(d).

(1) 2 MHz maximum authorized bandwidth channel:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
18141.0	n/a

(2) 6 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
216 MHz Separation	
18145.0	n/a
18151.0	18367.0
18157.0	18373.0
18163.0	18379.0
18169.0	18385.0
18175.0	18391.0
18181.0	18397.0
18187.0	18403.0
18193.0	18409.0
18199.0	18415.0
18205.0	18421.0
18211.0	18427.0
18217.0	18433.0
18223.0	18439.0
18229.0	18445.0
18235.0	18451.0
18241.0	18457.0
18247.0	18463.0
18253.0	18469.0
18259.0	18475.0
18265.0	18481.0
18271.0	18487.0
18277.0	18493.0
18283.0	18499.0
18289.0	18505.0
18295.0	18511.0
18301.0	18517.0
18307.0	18523.0
18313.0	18529.0
18319.0	18535.0
18325.0	18541.0
18331.0	18547.0
18337.0	18553.0
18343.0	18559.0
18349.0	18565.0
18355.0	18571.0
18361.0	18577.0

(3) 10 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1560 MHz Separation	
17705.0	19265.0
17715.0	19275.0
17725.0	19285.0
17735.0	19295.0
17745.0	19305.0
17755.0	19315.0
17765.0	19325.0
17775.0	19335.0
17785.0	19345.0
17795.0	19355.0
17805.0	19365.0
17815.0	19375.0
17825.0	19385.0
17835.0	19395.0
17845.0	19405.0
17855.0	19415.0
17865.0	19425.0
17875.0	19435.0
17885.0	19445.0
17895.0	19455.0
17905.0	19465.0
17915.0	19475.0
17925.0	19485.0
17935.0	19495.0
17945.0	19505.0
17955.0	19515.0
17965.0	19525.0
17975.0	19535.0
17985.0	19545.0
17995.0	19555.0
18005.0	19565.0
18015.0	19575.0
18025.0	19585.0
18035.0	19595.0
18045.0	19605.0
18055.0	19615.0
18065.0	19625.0
18075.0	19635.0
18085.0	19645.0
18095.0	19655.0
18105.0	19665.0
18115.0	19675.0
18125.0	19685.0
18135.0	19695.0

(4) 20 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1560 MHz Separation	
17710.0	19270.0
17730.0	19290.0
17750.0	19310.0
17770.0	19330.0
17790.0	19350.0
17810.0	19370.0
17830.0	19390.0
17850.0	19410.0
17870.0	19430.0
17890.0	19450.0
17910.0	19470.0
17930.0	19490.0
17950.0	19510.0
17970.0	19530.0
17990.0	19550.0
18010.0	19570.0
18030.0	19590.0
18050.0	19610.0
18070.0	19630.0
18090.0	19650.0
18110.0	19670.0
18130.0	19690.0

(5) 40 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1560 MHz Separation	
17720.0	19280.0
17760.0	19320.0
17800.0	19360.0
17840.0	19400.0
17880.0	19440.0
17920.0	19480.0
17960.0	19520.0
18000.0	19560.0
18040.0	19600.0
18080.0	19640.0
18120.0	19680.0

(6) 80 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1560 MHz Separation	
17740.0	19300.0
17820.0	19380.0
17900.0	19460.0
17980.0	19540.0
18060.0	19620.0

(h) *31.0 to 31.3 GHz.* The following frequencies are available for assignment to television STL, television relay stations and television translator relay stations. The provisions of §74.604 do not apply to the use of these frequencies. These frequencies are shared on a coequal basis with other stations in the fixed and mobile services (see Parts 21, 78, 94 and 95). Applicants may use either a two-way link or one or both frequencies of a frequency pair for one-way links. No interference protection is afforded to fixed or mobile stations operating in this band.

(1) 25 MHz authorized bandwidth channels, 150 MHz separation.

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1,012.5	31,162.5
1,037.5	31,187.5
1,062.5	31,212.5
1,087.5	31,237.5
1,112.5	31,262.5
1,137.5	31,287.5

(2) 50 MHz authorized bandwidth channels, 150 MHz separation.

Transmit (receive) (MHz)	Receive (transmit) (MHz)
31,025.0	31,175.0
31,075.0	31,225.0
31,125.0	31,275.0

(i) TV STL and TV relay stations may be authorized, on a secondary basis and subject to the provisions of Subpart G of this chapter, to operate fixed point-to-point service on the UHF-TV channels 14-69. These stations must not interfere with and must accept interference from current and future full-power UHF-TV stations, LPTV stations, translator stations. They will also be secondary to current land mobile stations (in areas where land mobile sharing is currently permitted and contingent on the decision reached in the pending Dockets No. 85-172 and No. 84-902).

(j) *6425 to 6525 MHz—Mobile Only.* Paired and un-paired operations permitted. Use of this spectrum for direct delivery of video programs to the general public or multi-channel cable distribution is not permitted. This band is co-equally shared with mobile stations licensed pursuant to Parts 21, 78 and 94 of the Commission's Rules. The following channel plans apply.

(1) 1 MHz maximum authorized bandwidth channels.

Transmit (or receive MHz)	Receive (or transmit) (MHz)
6425.5	6475.5
6450.5	6500.5

(2) 8 MHz maximum authorized bandwidth channels.

Transmit (or receive MHz)	Receive (or transmit) (MHz)
6430.0	6480.0
6438.0	6488.0
6446.0	6596.0
6455.0	6505.0
6463.0	6513.0
6471.0	6521.0

(3) 25 MHz maximum authorized bandwidth channels.

Transmit (or receive MHz)	Receive (or transmit (MHz)
6437.5 6462.5	6487.5 6512.5

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082; 47 U.S.C. 154, 155, 303)

[28 FR 13718, Dec. 14, 1963]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 74.602, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 74.603 Sound channels.

(a) The frequencies listed in § 74.602(a) may be used for the simultaneous transmission of the picture and sound portions of TV broadcast programs and for cue and order circuits, either by means of multiplexing or by the use of a separate transmitter within the same channel. When multiplexing of a TV STL station is contemplated, consideration should be given to the requirements of § 73.687 of this Chapter regarding the overall system performance requirements. Applications for new TV pickup, TV STL, TV relay and TV translator relay stations shall clearly indicate the nature of any mutliplexing proposed. Multiplexing equipment may be installed on licensed equipment without authority of the FCC, provided the installation of such apparatus on a TV STL station shall not result in degradation of the overall system performance of the TV broadcast station below that permitted by § 73.687 of this chapter.

(b) The aural portion of television broadcast program material may be transmitted over an aural broadcast STL or intercity relay station licensed under the provisions of Subpart E of this part, but only on a secondary, non-interference basis to the programming of aural broadcast stations. A TV station licensee may continue such operation until the channel assigned to its Subpart E station is requested by an aural broadcast licensee after a showing that no other vacant channels are available or satisfactory. Upon Commission concurrence with the aural broadcast licensee request, the TV station licensee will be required to discontinue operation on the requested frequency. In areas where only a portion of the Subpart E frequencies used by TV station licensees are required by aural broadcast licensees, the Commission will assist all affected parties in arriving at an equitable solution. The provisions of this paragraph do not preclude continued use of Subpart E facilities for relay of TV sound where the facilities are authorized to an aural broadcast licensee and the primary purpose of the station is to relay aural broadcast programming.

(c) Aural STL or intercity relay stations licensed as of July 10, 1970, to operate in the frequency band 942-947 MHz, may continue to so operate pending a decision as to their disposition through a future rule making proceeding.

(d) Remote pickup broadcast stations may be used in conjunction with television pickup stations for the transmission of the aural portion of television programs or events that occur outside a television studio and for the transmission of cues, orders, and other related communications necessary thereto. The rules governing remote pickup broadcast stations are contained in Subpart D of this part.

[28 FR 13718, Dec. 14, 1963, as amended at 47 FR 55936, Dec. 14, 1982; 48 FR 24385, June 1, 1983]

§ 74.604 Interference avoidance.

(a) Because the Commission does not undertake frequency coordination, applicants for new TV broadcast auxiliary authorizations are responsible for selecting the frequency assignments that are least likely to result in mutual interference with other licensees in the same area. Applicants may consult local coordination committees, where they exist, for information on frequencies available in the area. In selecting frequencies, consideration should be given to the relative locations of receiving points, normal transmission paths, and the nature of the contemplated operation.

(b) Where two or more licensees are assigned a common channel for TV pickup, TV STL, or TV relay purposes in the same area and simultaneous operation is contemplated, they shall take such steps as may be necessary to avoid mutual interference, including consultation with the local coordination committee, if one exists. If a mutual agreement to this effect cannot be reached, the Commission must be notified and it will take such action as may be necessary, including time sharing arrangements, to assure an equitable distribution of available frequencies.

(c) For those interference disputes brought to the Commission for resolution, TV broadcast auxiliary channels will have the following priority for purposes of interference protection:

(1) All fixed links for full service broadcast stations and cable systems.

(2) TV and CARS pickup stations.

(3) Fixed or mobile stations serving translator or low power TV stations.

(4) Backup facilities; TV pickup stations used outside a licensee's local service area.

(5) Any transmission, pursuant to § 74.631(f), that does not involve the delivery of program material to a licensee's associated TV broadcast station.

(d) Interference between two stations having the same priority shall be resolved in favor of the station licensed first on a particular path.

[48 FR 17091, Apr. 21, 1983]

§ 74.631 Permissible service.

(a) The licensee of a television pickup station authorizes the transmission of program material, orders concerning such program material, and related communications necessary to the accomplishment of such transmissions, from the scenes of events occurring in places other than a television studio, to its associated television broadcast station, to such other stations as are broadcasting the same program material, or to the network or networks with which the television broadcast station is affiliated. Television pickup stations may be operated in conjunction with other television broadcast stations not aformentioned in this paragraph: *Provided*, That the transmissions by the television pickup station are under the control of the licensee of the television pickup station and that such operation shall not exceed a total of 10 days in any 30-day period. Television pickup stations may be used to provide temporary studio-transmitter links or intercity relay circuits consistent with § 74.632 without further authority of the Commission: *Provided, however*, That prior Commission authority shall be obtained if the transmitting antenna to be installed will increase the height of any natural formation or man-made structure by more than 6.1 meters (20 feet) and will be in existence for a period of more than 2 consecutive days.

NOTE: As used in this subpart, "associated television broadcast station" means a television broadcast station licensed to the licensee of the television auxiliary broadcast station and with which the television auxiliary station is licensed as an auxiliary facility.

(b) A television broadcast STL station is authorized to transmit visual program material between the studio and the transmitter of a television broadcast station for simultaneous or delayed broadcast.

(c) A TV relay station is authorized to transmit visual program material between TV broadcast stations for simultaneous or delayed broadcast, or may be used to transmit visual program material from a remote pickup receiver site of a single station.

(d) The transmitter of an STL, TV relay station or TV translator relay station may be multiplexed to provide additional communication channels. A TV broadcast STL or TV relay station will be authorized only in those cases where the principal use is the transmission of television broadcast program material for use by its associated TV broadcast station. However, STL or TV relay stations so licensed may be operated at any time for the transmission of multiplexed communications whether or not visual program material is being transmitted, provided that such operation does not cause harmful interference to TV broadcast pickup, STL or TV relay stations transmitting television broadcast program material.

(e) Except as provided in paragraphs (a), (d), (f) and (j) of this section, all program material transmitted over a TV pickup, STL, or TV relay station shall be used by or intended for use by a TV broadcast station owned by or under the common control of the licensee of the TV pickup, STL, or TV relay station. Program material transmitted over a TV pickup, STL or TV relay station and so used by the licensee of such facility may, with the permission of the licensee of the broadcast auxiliary facility, be used by other TV broadcast stations and by non-broadcast closed circuit educational TV systems operated by educational institutions.

(f) A TV broadcast pickup, STL, or TV relay station may be used for the transmission of material to be used by others, including but not limited to other broadcast stations, cable television systems, and educational institutions. This use shall not interfere with the use of these broadcast auxiliary facilities for the transmission of programs and associated material intended to be used by the television station or stations licensed to or under common control of the licensee of the TV pickup, STL, or TV relay station. This use of the broadcast auxiliary facilities must not cause harmful interference to broadcast auxiliary stations operating in accordance with the basic frequency allocation, and the licensee of the TV pickup, STL, or TV relay station must retain exclusive control over the operation of the facilities. Prior to operating pursuant to the provisions of this section, the licensee shall, for the intended location or area-of-operation, notify the appropriate frequency coordinatioin committee or any licensee(s) assigned the use of the proposed operating frequency, concerning the particulars of the intended operation and must provide the name and telephone number of a person who may be contacted in the event of interference.

(g) Except as provided in paragraph (d) of this section, a television translator relay station is authorized for the purpose of relaying the programs and signals of a television broadcast station to television broadcast translator stations for simultaneous retransmission.

(h) A TV microwave booster station is authorized to retransmit the signals of a TV pickup, TV STL, TV relay, or TV translator relay station.

(i) TV broadcast auxiliary stations authorized pursuant to this subpart may additionally be authorized to supply programs and signals of TV broadcast stations to cable television systems or CARS stations. Where the licensee of a TV broadcast auxiliary station supplies programs and signals to cable television systems or CARS stations, the TV auxiliary licensee must have exclusive control over the operation of the TV auxiliary stations licensed to it. Contributions to capital and operating expenses may be accepted only on a cost-sharing, non-profit basis, prorated on an equitable basis among all parties being supplied with program material.

(j) A broadcast network-entity may use television auxiliary service stations to transmit their own television program materials to broadcast stations, other broadcast network-entities, cable systems and cable network-entities: *Provided, however,* that the bands 1990–2110 MHz, 6425–6525 MHz and 6875–7125 MHz may be used by broadcast network-entities only for television pick-up stations.

[28 FR 13718, Dec. 14, 1963, as amended at 29 FR 15524, Nov. 19, 1964; 43 FR 1950, Jan. 13, 1978; 44 FR 32381, June 6, 1979; 47 FR 55937, Dec. 14, 1982; 48 FR 17092, Apr. 21, 1983; 49 FR 7130, Feb. 27, 1984; 52 FR 7142, Mar. 9, 1987]

§ 74.632 Licensing requirements.

(a) Licenses for television pickup, television STL, television microwave booster, or television relay stations will be issued only to licensees of television broadcast stations, and broadcast network-entities and, further, on a secondary basis, to licensees of low power television stations. A separate application is required for each fixed station and the application shall be specific with regard to the frequency requested. A mobile station license may be issued for any number of mobile transmitters to operate in a specific area or frequency band and the applicant shall be specific with regard to the frequencies requested. In lieu of specifying specific transmitter types, applicants shall certify that the transmitter used or to be used at the requested facility is type accepted, or was manufactured before October 1, 1981. Applications for consolidation of individual mobile station licenses into a system license will be accepted only at the time application is made for renewal of the main (Part 73) station license.

(b) A license for a TV relay station may be issued in any case where the circuit will operate between TV broadcast stations either by means of "off-the-air" pickup and relay or location of the initial relay station at the studio or transmitter of a TV broadcast station.

(c) An application for construction permit for a new TV pickup station shall designate the TV broadcast station with which it is to be operated and specify the area in which the proposed operation is intended. The maximum permissible area of operation will generally be that of a standard metropolitan area, unless a special showing is made that a larger area is necessary.

(d) Licensees who have two or more TV broadcast stations located in different cities shall, in applying for a new TV pickup station, designate the TV broadcast station in conjunction with which it is to be operated principally. Operation in a city which is not the city of license of the associated TV broadcast station is on a secondary, non-interference basis to home-city users.

(e) A license for a TV translator relay station will be issued only to licensees of low power TV and TV translator stations. The application for construction permit shall designate the television broadcast station to be relayed, the source of the television broadcast station's signals, and the television broadcast translator station with which it is to be operated. *However*, a television translator relay station license may be issued to a cooperative enterprise wholly owned by licensees of television broadcast translators or licensees of television broadcast translators and cable television owners or operators upon a showing that the applicant is qualified under the Communication Act of 1934, as amended.

(f) Licensees of TV pickup, TV STL, TV relay, and TV translator relay stations may be authorized to operate one or more TV microwave booster stations for the purpose of relaying signals over a path that cannot be covered with a single station.

NOTE: Applications for TV microwave booster stations will not be accepted for filing prior to January 1, 1985.

(g) In case of permanent discontinuance of operation of a station licensed under this subpart, the licensee shall forward the station license to the FCC, Washington, DC 20554, for cancellation. A station which is not operated for a period of one year is considered to have been permanently discontinued.

[28 FR 13718, Dec. 14, 1963, as amended at 44 FR 32382, June 6, 1979; 47 FR 55937, Dec. 14, 1982; 48 FR 9012, Mar. 3, 1983; 48 FR 17092, Apr. 21, 1983; 48 FR 21486, May 12, 1983; 49 FR 7130, Feb. 27, 1984; 49 FR 10930, Mar. 23, 1984; 52 FR 7142, Mar. 9, 1987]

§ 74.633 Temporary authorizations.

(a) Special temporary authority may be granted for TV broadcast auxiliary station operation which cannot be conducted in accordance with § 74.24. Such authority will normally be granted only for operations of a temporary nature. Where operation is seen as likely on a continuing annual basis, an application for a regular authorization should be submitted.

(b) A request for special temporary authority for the operation of a television auxiliary broadcast station may be made by informal application, which shall be filed with the Commission at least 10 days prior to the date of the proposed operation. *Provided*, That an application filed within less than 10 days of the proposed operation may be accepted upon a satisfactory showing of the reasons for the delay in submitting the request.

(c) An application for special temporary authority shall set forth full particulars of the purpose for which the request is made, and shall show the type of equipment, power output, emission, and frequency or frequencies proposed to be used, as well as the time, date and location of the proposed operation. In the event that the proposed antenna installation will increase the height of any natural formation, or existing man-made structure, by more than 6.1 meters (20 feet), a vertical plan sketch showing the height of the structure proposed to be erected, the height above ground of any existing structure, the elevation of the site above mean sea level, and the geographic coordinates of the proposed site, shall be submitted with the application.

(d) A request for special temporary authority shall specify a channel or channels consistent with the provisions of § 74.602: *Provided*, That in the case of events of wide-spread interest and importance which cannot be transmitted successfully on these frequencies, frequencies assigned to other services may be requested upon a showing that operation thereon will not cause interference to established stations: *And provided further*, That in no case will a television auxiliary broadcast operation be authorized on frequencies employed for the safety of life and property.

(e) When the transmitting equipment utilized is not licensed to the user, the user shall nevertheless have full control over the use of the equipment during the period it is operated.

(f) Special temporary authority to permit operation of a TV auxiliary broadcast station of any class pending FCC action on an application for regular authority will not normally be granted.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318)

[28 FR 13720, Dec. 14, 1963, as amended at 47 FR 9221, Mar. 4, 1982; 47 FR 55937, Dec. 14, 1982; 50 FR 23710, June 5, 1985; 52 FR 10570, Apr. 2, 1987]

§ 74.634 Remote control operation.

(a) A TV auxiliary station may be operated by remote control provided that such operation is conducted in accordance with the conditions listed below:

(1) The remote control system must be designed, installed, and protected so that the transmitter can only be activated or controlled by operators authorized by the licensee.

(2) The remote control equipment must be maintained to ensure proper operation.

(3) The remote control system must be designed to prevent inadvertent transmitter operation caused by malfunctions in the circuits between the control point and transmitter.

(b) The FCC may notify the licensee to cease or modify operation in the case of frequency usage disputes, interference or similar situations where such action appears to be in the public interest, convenience and necessity.

[28 FR 13718, Dec. 14, 1963, as amended at 47 FR 55937, Dec. 14, 1982; 50 FR 48600, Nov. 26, 1985]

§ 74.635 Unattended operation.

(a) TV relay stations, TV translator relay stations, TV STL stations, and TV microwave booster stations may be operated unattended under the following conditions:

(1) The transmitter must be provided with adequate safeguards to prevent improper operation.

(2) The transmitter shall be so installed and protected that it is not accessible to other than duly authorized persons;

(3) TV relay stations, TV STL stations, TV translator relay stations, and TV microwave booster stations used with these stations, shall be observed at the receiving end of the microwave circuit as often as necessary to ensure proper station operation by a person designated by the licensee, who must institute measures sufficient to ensure prompt correction of any condition of improper operation. However, an STL station (and any TV microwave booster station) associated with a TV broadcast station operated by remote control may be observed by monitoring the TV station's transmitted signal at the remote control point. Additionally, a TV translator relay station (and any associated TV microwave booster station) may be observed by monitoring the associated TV translator station's transmitted signal.

(b) The FCC may notify the licensee to cease or modify operation in the case of frequency usage disputes, interference or similar situations where such action appears to be in the public interest, convenience and necessity.

[28 FR 13718, Dec. 14, 1963, as amended at 31 FR 15314, Dec. 7, 1966; 43 FR 1950, Jan. 13, 1978; 47 FR 55937, Dec. 14, 1982; 49 FR 7131, Feb. 27, 1984; 50 FR 32417, Aug. 12, 1985]

§ 74.636 Power limitations.

Transmitter peak output power shall not be greater than necessary, and in any event, shall not exceed the power listed in the table below:

Frequency band (MHz)	Maximum allowable transmitter power		Maximum allowable EIRP	
	Fixed (W)	Mobil (W)	Fixed (dBW)	Mobil (dBW)
1,990 to 2,110	20.0	12.0		
2,450 to 2,500	20.0	12.0		
6,425 to 6,525		12.0		+35
6,875 to 7,125	20.0	12.0	+55	+35
12,700 to 13,250	5.0	1.5	+55	+45
17,700 to 18,600	10.0.		+55	
18,600 to 18,800	[1] 10.0		+35	
18,800 to 19,700	10.0		+55	
31,000 to 31,300	0.05	0.05		
38,600 to 40,000		1.5		

[1] The power delivered to the antenna is limited to -3 dBW.

[45 FR 78692, Nov. 26, 1980, as amended at 52 FR 7142, Mar. 9, 1987]

§ 74.637 Emissions and emission limitations.

(a) For frequency modulation, the mean power of emissions shall be attenuated below the mean transmitter power (P) in accordance with the following schedule:

(1) On any frequency removed from the assigned frequency by more than 50% and up to 100% of the authorized bandwidth: at least 25 dB.

(2) On any frequency removed from the assigned frequency by more than 100% and up to 150% of the authorized bandwidth: at least 35 dB.

(3) On any frequency removed from the assigned frequency by more than 150% of the authorized bandwidth: at least 43+10 Log(P) dB.

(b) For all emissions except frequency modulation, the peak power of emissions shall be attenuated below the peak envelope transmitter power (P) in accordance with the following schedule:

(1) On any frequency 500 Hz inside the channel edge up to and including 2500 Hz outside the same edge, the following formula will apply:

$$\text{Attenuation} = 29 \text{ Log} \left(\frac{25}{11} \left(D + 2.5 - \frac{W}{2} \right)^2 \right) \text{dB}$$

or 50 dB whichever is the lesser attenuation. Where: D is the displacement frequency (kHz) from the center of the authorized bandwidth; and W is the channel bandwidth (kHz).

(2) On any frequency removed from the channel edge by more than 2500 Hz: At least 43+10 Log (P) dB.

(c) For operation in the bands 6425-6525 MHz, 17,700-19,700 MHz, and 31,000-31,300 MHz: TV broadcast STL, relay and booster stations may be authorized to employ analog or digital modulation in this band. The mean power of any emission shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

(1) When using frequency modulation:

(i) On any frequency removed from the assigned (center) frequency by more than 50% up to and including 100% of the authorized bandwidth: At least 25 dB;

(ii) On any frequency removed from the assigned (center) frequency by more than 100% up to and including 250% of the authorized bandwidth: At least 35 dB;

(iii) On any frequency removed from the assigned (center) frequency by more than 250% of the authorized bandwidth: At least 43+10 log 10 (mean output power in watts) dB, or 80 dB, whichever is the lesser attenuation.

(2) When using digital modulation:

(i) In any 1 NHz band, the center frequency of which is removed from the assigned frequency by more than 50% up to and including 250% of the authorized bandwidth: As specified by the following equation but in no event less than 11 dB.

$$A = 11 + 0.4\,(P - 50) + 10\log_{10}B$$

where:

A = Attenuation (in dB) below the mean output power level

P = Percent removed from the carrier frequency

B = Authorized bandwidth in MHz

[Attenuation greater than 56 decibels is not required.]

(ii) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250% of the authorized bandwidth: At least $43 = 10\log_{10}$ (mean output power in watts) dB, or 80 dB, whichever is the lesser attenuation.

(3) Amplitude Modulation.

For vestigial sideband AM video: On any frequency removed from the center frequency of the authorized band by more than 50%: at least 50 dB below peak power of the emission.

(d) In the event that interference to other stations is caused by emissions outside the authorized channel, the FCC may require greater attenuation than that specified in paragraph (b) of this section.

(e) The following limitations also apply to the operation of TV microwave booster stations:

(1) The booster station must receive and amplify the signals of the originating station and retransmit them on the same frequency without significantly altering them in any way. The characteristics of the booster transmitter output signal shall meet the requirements applicable to the signal of the originating station.

(2) The licensee is responsible for correcting any condition of interference that results from the radiation of radio frequency energy outside the assigned channel. Upon notice by the FCC to the station licensee that interference is being caused, operation of the apparatus must be immediately suspended and may not be resumed until the interference has been eliminated or it can be demonstrated that the interference is not due to spurious emissions. However, short term test transmissions may be made during the period of suspended operation to determine the efficacy of remedial measures.

(3) In each instance where suspension of operation is required, the licensee must submit a full report to the FCC after operation is resumed. The report must contain details of the nature of the interference, the source of interfering signals, and the remedial steps taken to eliminate the interference.

(f) In the event a station's emissions outside its authorized channel cause harmful interference, the Commission may require the licensee to take such further steps as may be necessary to eliminate the interference.

(g) The maximum bandwidth which will be authorized per frequency assignment is set out in the table which follows. Regardless of the maximum authorized bandwidth specified for each frequency band, the Commission reserves the right to issue a license for less than the maximum bandwidth if it appears that less bandwidth would be sufficient to support an applicant's intended communications.

Frequency Band (MHz)	Maximum authorized bandwidth (MHz)
1,990 to 2,110	18
6,425 to 6,525	25
6,875 to 7,125	20
12,700 to 13,250	25
17,700 to 19,700	60
31,000 to 31,300	25 or 50
38,600 to 40,000	

[45 FR 78692, Nov. 26, 1980, as amended at 48 FR 50734, Nov. 3, 1983; 49 FR 7131, Feb. 27, 1984; 49 FR 37778, Sept. 26, 1984; 50 FR 7342, Feb. 22, 1985; 50 FR 34150, Aug. 21, 1985; 50 FR 48600, Nov. 26, 1985; 52 FR 7142, Mar. 9, 1987]

§ 74.638 Frequency coordination.

(a) Channels in Band D are shared with certain Private Operational Fixed Stations authorized under Part 94, § 94.93 after September 9, 1983. After this date all Broadcast Auxiliary use of these bands is subject to coordination using the following procedure:

(1) Before filing an application for new or modified facilities under this part the applicant must perform a fre-

quency engineering analysis to ensure that the proposed facilities will not cause interference to existing or previously applied for stations in this band of a magnitude greater than that specified below.

(2) The general criteria for determining allowable adjacent or co-channel interference protection to be afforded, regardless of system length or type of modulation, multiplexing or frequency band, shall be such that the interfering signal shall not produce more than 1.0 dB degradation of the practical threshold of the protected receiver. Degradation is determined by calculating the ratio in dB between the desired carrier signal and undesired interfering signal (C/I ratio) appearing at the input to the receiver under investigation (the victim receiver). The development of the C/I ratios from the criteria for maximum allowable interference level per exposure and the methods used to perform path calculations shall follow generally acceptable good engineering practices. Procedures as may be developed by the Electronics Industries Association (EIA), the Institute of Electrical and Electronics Engineers, Inc. (IEEE), the American National Standards Institute (ANSI) or any other recognized authority will be acceptable to the FCC.

(3) Where the development of the carrier to interference ratio (C/I) is not covered by generally acceptable procedures or where the applicant does not wish to develop the carrier to interference ratio, the applicant shall employ the following C/I protection ratios.

(i) Co-channel interference: For both sideband and carrier-beat, (applicable to all bands), the previously authorized system shall be afforded a carrier to interfering signal protection ratio of at least 90 dB.

(ii) Adjacent channel interference: The existing or previously authorized system shall be afforded a carrier to interfering signal protection ratio of at least 56 dB.

(b) Coordination of assignments in the 6425-6525 MHz and 17.7-19.7 GHz bands will be in accordance with the procedure established in § 21.100(d) *except* that the prior coordination process for mobile (temporary fixed) assignments may be completed orally and the period allowed for response to a coordination notification may be less than 30 days if the parties agree.

[49 FR 50734, Nov. 3, 1983, as amended at 52 FR 7142, Mar. 9, 1987]

§ 74.641 Antenna systems.

(a) For fixed stations operating between 1990 MHz and 31.3 GHz and aeronautical mobile stations operating between 31.0 GHz and 31.3 GHz, the following standards apply:

(1) Fixed TV broadcast auxiliary stations shall use directional antennas that meet the performance standards indicated in the following table. Upon adequate showing of need to serve a larger sector, or more than a single sector, greater beamwidth or multiple antennas may be authorized. Applicants shall request, and authorization for stations in this service will specify, the polarization of each transmitted signal. Booster station antennas having narrower beamwidths and reduced sidelobe radiation may be required in congested areas, or to resolve interference problems.

ANTENNA STANDARDS

Frequency (MHz)	Category	Maximum beam-width to 3 dB points (included angle in degrees)	Minimum antenna gain (dBi)	Minimum radiation suppression to angle in degrees from centerline of main beam in decibles						
				5° to 10°	10° to 15°	15° to 20°	20° to 30°	30° to 100°	100° to 140°	140° to 180°
1,990 to 2,110	A	5.0	n/a	12	18	22	25	29	33	39
	B	8.0	n/a	5	18	20	20	25	28	36
6,875 to 7,125	A	1.5	n/a	26	29	32	34	38	41	49
	B	2.0	n/a	21	25	29	32	35	39	45
12,700 to 13,250	A	1.0	n/a	23	28	35	39	41	42	50

ANTENNA STANDARDS—Continued

Frequency (MHz)	Category	Maximum beamwidth to 3 dB points (included angle in degrees)	Minimum antenna gain (dBi)	Minimum radiation suppression to angle in degrees from centerline of main beam in decibles					
				5° to 10°	10° to 15°	15° to 20°	20° to 30°	30° to 100°	100° to 140°
17,700 to 19,700	B	2.0	n/a	20	25	28	30	32	37
	A	n/a	38.0	25	29	33	36	42	55
31,000 to 31,300 [2]	B	n/a	38.0	20	24	28	32	35	36
	NA	[1] 4.0	38.0						

[1] The minimum front-to-back ratio shall be 38 bBi.

[2] Mobile, except aeronautical mobile, stations need not comply with these standards.

NOTE: Stations must employ an antenna that meets the performance standards for category A, except that in areas not subject to frequency congestion antennas meeting standards for category B may be employed. Note, however, that the Commission may require that use of a high performance antenna where interference problems can be resolved by the use of such antennas.

(2) New periscope antenna systems will be authorized upon a certification that the radiation, in a horizontal plane, from an illuminating antenna and reflector combination meets or exceeds the antenna standards of this section. This provision similarly applies to passive repeaters employed to redirect or repeat the signal from a station's directional antenna system.

(3) The choice of receiving antennas is left to the discretion of the licensee. However, licensees will not be protected from interference which results from the use of antennas with poorer performance than identified in the table of this section.

(4) [Reserved]

(5) Pickup stations are not subject to the performance standards herein stated. The provisions of this paragraph are effective for all new applications accepted for filing after October 1, 1981.

(b) Any fixed station licensed pursuant to applications for filing prior to October 1, 1981, may continue to use existing antenna systems, subject to periodic renewal until October 1, 1991. After October 1, 1991, all licensees are to use antenna systems in conformance with the standards of this section. TV auxiliary broadcast stations not located in areas subject to frequency congestion are to employ a category A antenna when:

(1) A showing by an applicant of a new TV auxiliary broadcast station or Cable Television Relay Service (CARS) station, which shares the 12.7-13.20 GHz band with TV auxiliary broadcast, indicates that use of a category B antenna limits a proposed project because of interference, and

(2) That use of a category A antenna will remedy the interference thus allowing the project to be realized.

(c) As an exception to the provisions of this section, the FCC may approve requests for use of periscope antenna systems where a persuasive showing is made that no frequency conflicts exist in the area of proposed use. Such approvals shall be conditioned to a standard antenna as required in paragraph (a) of this section when an applicant of a new TV auxiliary broadcast or Cable Television Relay station indicates that the use of the existing antenna system will cause interference and the use of a category A or B antenna will remedy the interference.

(d) As a further exception to the provision of paragraph (a) of this section, the Commission may approve antenna systems not conforming to the technical standards where a persuasive showing is made that:

(1) Indicates in detail why an antenna system complying with the requirements of paragraph (a) of this section cannot be installed, and

(2) Includes a statement indicating that frequency coordination as required in § 74.604 (a) was accomplished.

[45 FR 78693, Nov. 26, 1980, as amended at 49 FR 7131, Feb. 27, 1984; 49 FR 37778, Sept. 26, 1984; 50 FR 7342, Feb. 22, 1985; 51 FR 19840, June 3, 1986; 52 FR 7143, Mar. 9, 1987; 55 FR 11587, Mar. 29, 1990]

§ 74.643 Interference to geostationary-satellites.

These limitations are necessary to minimize the probability of harmful interference to reception in the bands 6425-6525 MHz, 6875-7075 MHz and 12.7-12.75 GHz on board geostationary space stations in the fixed-satellite service (Part 25).

(a) *6425 to 6525 and 6875 to 7075 MHz.* No directional transmitting antenna utilized by a fixed station operating in these bands shall be aimed within 2 degrees of the geostationary-satellite orbit, taking into account atmospheric refraction. However, exception may be made in unusual circumstances upon a showing that there is no reasonable alternative to the transmission path proposed. If there is no evidence that such exception would cause possible harmful interference to an authorized satellite system, said transmission path may be authorized on waiver basis where the maximum value of the equivalent isotropically radiated power (EIRP) does not exceed:

(1) +47 dBW for any antenna beam directed within 0.5 degrees of the stationary satellite orbit or

(2) +47 to +55 dBW, on a linear decibel scale (8 dB per degree) for any antenna beam directed between 0.5 degrees and 1.5 degrees of the stationary orbit.

(b) *12.7 to 12.75 GHz.* No directional transmitting antenna utilized by a fixed station operating in this band shall be aimed within 1.5 degrees of the geostationary-satellite orbit, taking into account atmospheric refraction. However, exception may be made in unusual circumstances upon a showing that there is no reasonable alternative to the transmission path proposed. If there is no evidence that such exception would cause possible harmful interference to an authorized satellite system, said transmission path may be authorized on waiver basis where the maximum value of the equivalent isotropically radiated power (EIRP) does not exceed +45 dBW for any antenna beam directed within 1.5 degrees of the stationary satellite orbit.

(c) Methods for calculating the azimuths to be avoided may be found in: CCIR Report No. 393 (Green Books), New Delhi, 1970; in "Radio-Relay Antenna Pointing for controlled Interference With Geostationary-Satellites" by C. W. Lundgren and A. S. May, *Bell System Technical Journal*, Vol. 48, No. 10, pp. 3387-3422, December 1969; and in "Geostationary Orbit Avoidance Computer Program" by Richard G. Gould, Common Carrier Bureau Report CC-7201, FCC, Washington, DC, 1972. This latter report is available through the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22151, in printed form (PB-211 500) or source card deck (PB-211 501).

[52 FR 7143, Mar. 9, 1987]

§ 74.644 Minimum path lengths for fixed links.

(a) The distance between end points of a fixed link must equal or exceed the value set forth in the table below or the EIRP must be reduced in accordance with the equation set forth below.

Frequency band (MHz)	Minimum path length (km)
below 1,850	n/a
1,850—2,110	17
6,425—7,125	17
12,200—13,250	5
above 17,700	n/a

(b) For paths shorter than those specified in the Table, the EIRP shall not exceed the value derived from the following equation.

EIRP = 30—20 log [A/B], dBW

where:

EIRP = equivalent isotropic radiated power in dBW.

A = Minimum path length from the Table for the frequency band in kilometers.

B = The actual path length in kilometers.

(c) Upon an appropriate technical showing, applicants and licensees unable to meet the minimum path length requirement may be granted an exception to these requirements.

[NOTE. Links authorized prior to April 1, 1987, are excluded from this requirement, except that, effective April 1, 1992, the Commission will require compliance with the criteria where an existing link would otherwise preclude establishment of a new link.]

[52 FR 7143, Mar. 9, 1987]

§ 74.651 Equipment changes.

(a) Commission authority, upon appropriate formal application (FCC Form 313) therefor, is required for any of the following equipment changes:

(1) Replacement of a specifically authorized transmitter by a transmitter that is not type accepted or notified for operation under this subpart pursuant to § 74.655(c).

(2) A change in the frequency of the operating channel or the transmitter output power.

(3) A change in the location of the TV broadcast auxiliary station transmitter or transmitting antenna authorized for use at a fixed location except when the relocation of the transmitter is within the same building.

(4) Any change in the overall height of the antenna structure, except where notice to the Federal Aviation Administration is specifically not required under § 17.14(b) of this chapter.

(5) Any change in the direction of the main radiation lobe of the transmitting antenna.

(b) Other equipment changes not specifically referred to in paragraph (a) of this section may be made at the discretion of the licensee provided that the FCC in Washington, D.C. is notified in writing upon the completion of such changes, and that the changes are described in the notification.

(c) Multiplexing equipment may be installed on any licensed TV broadcast STL, TV relay or translator relay station without authority from the Commission.

[28 FR 13718, Dec. 14, 1963, as amended at 38 FR 6827, Mar. 13, 1973; 47 FR 54448, Dec. 3, 1982; 47 FR 55938, Dec. 14, 1982; 49 FR 7131, Feb. 27, 1984]

§ 74.655 Authorization of equipment.

(a) Except as provided in paragraph (b), all transmitting equipment first marketed for use under this subpart or placed into service after October 1, 1981, must be type accepted or notified, as detailed in paragraph (g) of this section. Equipment which is used at a station licensed prior to October 1, 1985, which is not type accepted or notified, as detailed in paragraph (g) of this section, may continue to be used by the licensee or its successors or assignees, provided that if operation of such equipment causes harmful interference due to its failure to comply with the technical standards set forth in this subpart, the FCC may, at its discretion, require the licensee to take such corrective action as is necessary to eliminate the interference. However, such equipment may *not* be further marketed or reused under Part 74 after October 1, 1985. Transmitters designed for use in the 31.0 to 31.3 GHz band shall be authorized under the notification procedure.

(b) Type acceptance or notification is not required for transmitters used in conjunction with TV pickup stations operating with a peak output power not greater than 250 mW. Pickup stations operating in excess of 250 mW licensed pursuant to applications accepted for filing prior to October 1, 1980 may continue operation subject to periodic renewal. If operation of such equipment causes harmful interference the FCC may, at its discretion, require the licensee to take such corrective action as is necessary to eliminate the interference.

(c) The license of a TV auxiliary station may replace transmitting equipment with type accepted or notified equipment, as detailed under paragraph (g) of this section, without prior FCC approval, provided the proposed changes will not depart from any of the terms of the station or system authorization or the Commission's technical rules governing this service, and also provided that any changes made to type accepted or modified transmitting equipment is in compliance with the provisions of Part 2 of the FCC Rules concerning modifications to authorized equipment.

(d) Any manufacturer of a transmitter to be used in this service may apply for type acceptance or notification following the procedures set forth in Part 2 of the FCC Rules.

(e) An applicant for a TV broadcast auxiliary station may also apply for type acceptance or notification, as specified in paragraph (f) of this section, for an individual transmitter by following the procedures set forth in Subpart J of Part 2 of the FCC Rules and Regulations. Individual transmitters which are authorized will not normally be included in the FCC's Radio Equipment List.

(f) As of March 5, 1984, transmitters designed to be used exclusively for a TV STL station, a TV intercity relay station, a TV translator relay station, or a TV microwave booster station, shall be authorized under the notification procedure. All other transmitters will be authorized under the type acceptance procedure. Transmitters authorized under type acceptance are acceptable for use in all TV broadcast auxiliary stations (see § 2.904(d) of this chapter).

[49 FR 4000, Feb. 1, 1984, as amended at 49 FR 7131, Feb. 27, 1984; 49 FR 8253, Mar. 6, 1984; 49 FR 20504, May 15, 1984; 50 FR 7343, Feb. 22, 1985; 50 FR 32417, Aug. 12, 1985; 51 FR 26251, July 22, 1986]

§ 74.661 Frequency tolerance.

Stations in this service shall maintain the carrier frequency of each authorized transmitter to within the following percentage of the assigned frequency.

Frequency band (MHz)	Frequency Tolerance	
	Fixed (%)	Mobile (%)
1,990 to 2,110	[2] 0.005	0.005
6,425 to 6,525		0.005
6,875 to 7,125	[2] 0.005	0.005
12,700 to 13,250	[2] 0.005	0.005
17,700 to 18,820	0.003	
18,920 to 19,700	0.003	
31,000 to 31,300	0.03	0.03
38,600 to 40,000	[1] 0.005	[1] 0.005

[1] For transmitters with an output power of 50 mW or less, the frequency tolerance need only be 0.05%.

[2] Television translator relay stations shall maintain a frequency tolerance of 0.002%.

[52 FR 7143, Mar. 9, 1987]

§ 74.662 Frequency monitors and measurements.

The licensee of a television broadcast auxiliary station must provide means for measuring the operating frequency in order to ensure that the emissions are confined to the authorized channel.

[48 FR 38482, Aug. 24, 1983]

§ 74.663 Modulation limits.

If amplitude modulation is employed, negative modulation peaks shall not exceed 100%.

[45 FR 78694, Nov. 26, 1980]

§ 74.664 Posting of station license.

(a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted in the room in which the transmitter is located.

(b) Posting of the station license and any other instruments of authorization shall be done by affixing the license to the wall at the posting location, or by enclosing it in a binder or folder which is retained at the posting location so that the document will be readily available and easily accessible.

[28 FR 13718, Dec. 14, 1963, as amended at 48 FR 24385, June 1, 1983; 49 FR 29070, July 18, 1984; 50 FR 40015, Oct. 1, 1985]

§ 74.682 Station identification.

(a) Each television broadcast auxiliary station operating with a transmitter output power of 1 watt or more must, when actually transmitting programs, transmit station identification at the beginning and end of each period of operation, and hourly, as close to the hour as feasible, at a natural break in program offerings by one of the following means:

(1) Transmission of its own call sign by visual or aural means or by automatic transmission in international Morse telegraphy.

(2) Visual or aural transmission of the call sign of the TV broadcast station with which it is licensed as an auxiliary.

(3) Visual or aural transmission of the call sign of the TV broadcast station whose signals are being relayed or, where programs are obtained directly from network lines and relayed, the network identification.

(b) Identification transmissions during operation need not be made when to make such transmission would interrupt a single consecutive speech, play, religious service, symphony concert, or any type of production. In such cases, the identification transmission shall be made at the first interruption of the entertainment continuity and at the conclusion thereof.

(c) During occasions when a television pickup station is being used to deliver program material for network distribution it may transmit the network identification in lieu of its own or associated TV station call sign during the actual program pickup. However, if it is providing the network feed through its own associated TV broadcast station it shall perform the station identification required by paragraph (a) of this section at the beginning and end of each period of operation.

(d) A period of operation is defined as a single uninterrupted transmission or a series of intermittent transmissions from a single location or continuous or intermittent transmission from a television pickup station covering a single event from various locations, within a single broadcast day.

(e) Regardless of the method used for station identification it shall be performed in a manner conducive to prompt association of the signal source with the responsible licensee. In exercising the discretion provided by this rule, licensees are expected to act in a responsible manner to assure that result.

(f) TV microwave boosters stations will be assigned individual call signs. However, station identification will be accomplished by the retransmission of identification as provided in paragraph (a) of this section.

[31 FR 15488, Dec. 8, 1966; 32 FR 452, Jan. 17, 1967, as amended at 42 FR 36830, July 18, 1977; 43 FR 1951, Jan. 13, 1978; 44 FR 36041, June 20, 1979; 49 FR 7131, Feb. 27, 1984]

Subpart G—Low Power TV, TV Translator, and TV Booster Stations

§ 74.701 Definitions.

(a) *Television broadcast translator station.* A station in the broadcast service operated for the purpose of retransmitting the programs and signals of a television broadcast station, without significantly altering any characteristic of the original signal other than its frequency and amplitude, for the purpose of providing television reception to the general public.

(b) *Primary station.* The television broadcast station which provides the programs and signals being retransmitted by a television broadcast translator station.

(c) *VHF translator.* A television broacast translator station operating on a VHF television broadcast channel.

(d) *UHF translator.* A television broadcast translator station operating on a UHF television broadcast channel.

(e) *UHF translator signal booster.* A station in the broadcasting service operated for the sole purpose of retransmitting the signals of the UHF translator station by amplifying and reradiating such signals which have been received directly through space, without significantly altering any characteristic of the incoming signal other than its amplitude.

(f) *Low power TV station.* A station authorized under the provisions of this subpart that may retransmit the programs and signals of a TV broadcast station and that may originate programming in any amount greater than 30 seconds per hour and/or operates a subscription service. (See § 73.641 of part 73 of this chapter.)

(g) *Program origination.* For purposes of this part, program origination shall be any transmissions other than the simultaneous retransmission of the programs and signals of a TV broadcast station. Origination shall include locally generated television program signals and program signals obtained via video recordings (tapes and discs), microwave, common carrier circuits, or other sources.

(h) *Local origination.* Program origination if the parameters of the program source signal, as it reaches the transmitter site, are under the control of the low power TV station licensee. Transmission of TV program signals generated at the transmitter site constitutes local origination. Local origination also includes transmission of programs reaching the transmitter site via TV STL stations, but does not include transmission of signals obtained from either terrestrial or satellite microwave feeds or low power TV stations.

(i) *Television broadcast booster station.* A station in the broadcast service operated by the licensee or permittee of a full service television broadcast station for the purpose of retransmitting the programs and signals of such primary station without significantly altering any characteristic of the original signal other than its amplitude. A television broadcast booster station may only be located such that its entire service area is located within the protected contour of the primary station it retransmits. For purposes of this paragraph, the service area of the booster and the protected contour of the primary station will be determined by the methods prescribed in § 74.705(c).

[28 FR 13722, Dec. 14, 1963, as amended at 43 FR 1951, Jan. 13, 1978; 47 FR 21497, May 18, 1982; 48 FR 21486, May 12, 1983; 52 FR 7422, Mar. 11, 1987; 52 FR 31403, Aug. 20, 1987]

§ 74.702 Channel assignments.

(a) An applicant for a new low power TV or TV translator station or for changes in the facilities of an authorized station shall endeavor to select a channel on which its operation is not likely to cause interference. The applications must be specific with regard to the channel requested. Only one channel will be assigned to each station.

(1) Any one of the 12 standard VHF Channels (2 to 13 inclusive) may be assigned to a VHF low power TV or TV translator station. Channels 5 and 6 assigned in Alaska shall not cause harmful interference to and must accept interference from non-Government fixed operation authorized prior to January 1, 1982.

(2) Any one of the UHF Channels from 14 to 69, inclusive, may be assigned to a UHF low power TV or TV translator station. In accordance with § 73.603(c) of part 73, Channel 37 will not be assigned to such stations.

(3) Application for new low power TV or TV translator stations or for changes in existing stations, specifying operation above 806 MHz will not be accepted for filing. License renewals for existing TV translator stations operating on channels 70 (806-812 MHz) through 83 (884-890 MHz) will be granted only on a secondary basis to land mobile radio operations.

(b) Changes in the TV Table of Allotments (§ 73.606(b) of Part 73 of this chapter), authorizations to construct new TV broadcast stations or to change facilities of existing ones, may be made without regard to existing or proposed low power TV or TV translator stations. Where such a change results in a low power TV or TV translator station causing actual interference to reception of the TV broadcast station, the licensee or permittee of the low power TV or TV translator station shall eliminate the interference or file an application for a change in channel assignment pursuant to § 73.3572 of part 73 of this chapter.

(c) A television broadcast booster station will be authorized on the channel assigned to its primary station.

[47 FR 21497, May 18, 1982, as amended at 47 FR 30068, July 12, 1982; 47 FR 35590, Aug. 18, 1982; 52 FR 7423, Mar. 11, 1987; 52 FR 31403, Aug. 20, 1987]

§ 74.703 Interference.

(a) An application for a new low power TV, TV translator, or TV booster station or for a change in the facilities of such an authorized station will not be granted when it is apparent that interference will be caused. The licensee of a new low power TV, TV translator, or TV booster shall protect existing low power TV and TV translator stations from interference within the protected contour defined in § 74.707.

(b) It shall be the responsibility of the licensee of a low power TV, TV translator, or TV booster station to correct at its expense any condition of interference to the direct reception of the signal of any other TV broadcast station operating on the same channel as that used by the low power TV, TV translator, or TV booster station or an adjacent channel which occurs as a result of the operation of the low power TV, TV translator, or TV booster station. Interference will be considered to occur whenever reception of a regularly used signal is impaired by the signals radiated by the low power TV, TV translator, or TV booster station, regardless of the quality of the reception or the strength of the signal so used. If the interference cannot be promptly eliminated by the application of suitable techniques, operation of the offending low power TV, TV translator, or TV booster station shall be suspended and shall not be resumed until the interference has been eliminated. If the complainant refuses to permit the low Power TV, TV translator, or TV booster station to apply remedial techniques that demonstrably will eliminate the interference without impairment of the original reception, the licensee of the low power TV, TV translator, or TV booster station is absolved of further responsibility. TV booster stations will be exempt from the provisions of this paragraph to the extent that they may cause limited interference to their primary stations' signal subject to the conditions of paragraph (g) of this section.

(c) It shall be the responsibility of the licensee of a low power TV, TV translator, or TV booster station to correct any condition of interference which results from the radiation of radio frequency energy outside its assigned channel. Upon notice by the FCC to the station licensee or operator that such interference is caused by spurious omissions of the station, operation of the station shall be immediately suspended and not resumed until the interference has been eliminated. However, short test transmissions may be made during the period of suspended operation to check the efficacy of remedial measures.

(d) When a low power TV or TV translator station causes interference to a CATV system by radiations within its assigned channel at the cable headend or on the output channel of any system converter located at a receiver, the earlier user, whether cable system or low power TV or TV translator station, will be given priority on the channel, and the later user will be responsible for correction of the interference. When a low power TV or TV translator station causes interference to an MDS of ITFS system by radiations within its assigned channel on the output channel of any system converter located at a receiver, the earlie user, whether MDS system or lo power TV or TV translator station will be given priority on the channel and the later user will be responsible for correction of the interference.

(e) Low power TV and TV translator stations are being authorized on a secondary basis to existing land mobile uses and must correct whatever interference they cause to land mobile stations or cease operation.

(f) In each instance where suspension of operation is required, the licensee shall submit a full report to the FCC in Washington, D.C., after operation is resumed, containing details of the nature of the interference, the source of the interfering signals, and the remedial steps taken to eliminate the interference.

(g) A TV booster station may not disrupt the existing service of its primary station nor may it cause interference to the signal provided by the primary station within the principal community to be served.

[47 FR 21497, May 18, 1982, as amended at 48 FR 21487, May 12, 1983; 52 FR 31403, Aug. 20, 1987; 53 FR 4169, Feb. 12, 1988]

§ 74.705 TV broadcast station protection.

(a) The TV broadcast station protected contour will be its Grade B contour signal level as defined in § 73.683 and calculated from the authorized maximum radiated power (without depression angle correction), the horizontal radiation pattern, height above average terrain in the pertinent direction, and the appropriate chart from § 73.699.

(b)(1) An application to construct a new low power TV or TV translator station or change the facilities of an existing station will not be accepted if it specifies a site which is within the protected contour of a co-channel or first adjacent channel TV broadcast station.

(2) Due to the frequency spacing which exists between TV Channels 4 and 5, between Channels 6 and 7, and between Channels 13 and 14, adjacent channel protection standards shall not be applicable to these pairs of chan-

nels. (See § 73.603(a) of part 73 of this chapter.)

(3) A UHF low power TV or TV translator construction permit application will not be accepted if it specifies a site within the UHF TV broadcast station's protected contour and proposes operation on a channel either 14 or 15 channels above the channel in use by the TV broadcast station.

(4) A UHF low power TV or TV translator construction permit application will not be accepted if it specifies a site less than 100 kilometers from the transmitter site of a UHF TV broadcast station operating on a channel which is the seventh channel above the requested channel.

(5) A UHF low power TV or TV translator construction permit application will not be accepted if it specifies a site less than 32 kilometers from the transmitter site of a UHF TV broadcast station operating on a channel which is the second, third, fourth, or fifth channel above or below the requested channel.

(c) The low power TV, TV translator, or TV booster station field strength is calculated from the proposed effective radiated power (ERP) and the antenna height above average terrain (HAAT) in pertinent directions.

(1) For co-channel protection, the field strength is calculated using Figure 9a, 10a, or 10c of § 73.699 (F(50,10) charts) of Part 73 of this chapter.

(2) For low power TV, TV translator, and TV boosters that do not specify the same channel as the TV broadcast station to be protected, the field strength is calculated using Figure 9, 10, or 10b of § 73.699 (F(50,50) charts) of Part 73 of this chapter.

(d) A low power TV, TV translator, or TV booster station application will not be accepted if the ratio in dB of its field strength to that of the TV broadcast station at the protected contour fails to meet the following:

(1) −45 dB for co-channel operations without offset carrier frequency operation or −28 dB for offset carrier frequency operation. An application requesting offset carrier frequency operation must include the following:

(i) A requested offset designation (zero, plus, or minus) identifying the proposed direction of the 10 kHz offset from the standard carrier frequencies of the requested channel. If the offset designation is not different from that of the station being protected, the −45 dB ratio must be used.

(ii) A description of the means by which the low power TV, TV translator, or TV booster station will be maintained within the tolerances specified in § 74.761 for offset operation.

(2) 6 dB when the protected TV broadcast station operates on a VHF channel that is one channel above the requested channel.

(3) 12 dB when the protected TV broadcast station operates on a VHF channel that is one channel below the requested channel.

(4) 15 dB when the protected TV broadcast station operates on a UHF channel that is one channel above or below the requested channel.

(5) 23 dB when the protected TV broadcast station operates on a UHF channel that is fourteen channels below the requested channel.

(6) 6 dB when the protected TV broadcast station operates a UHF channel that is fifteen channels below the requested channel.

[47 FR 21497, May 18, 1982, as amended at 48 FR 21487, May 12, 1983; 52 FR 31403, Aug. 20, 1987]

§ 74.707 Low power TV and TV translator station protection.

(a)(1) A low power TV or TV translator will be protected from interference from other low power TV or TV translator stations, or TV booster stations within the following predicted contours:

(i) 62 dBu for stations on Channels 2 through 6;

(ii) 68 dBu for stations on Channels 7 through 13; and

(iii) 74 dBu for stations on Channels 14 through 69.

Existing licensees and permittees that did not furnish sufficient data required to calculate the above contours by April 15, 1983 are assigned protected contours having the following radii:

Up to 0.001 kW VHF/UHF—1 mile (1.6 km) from transmitter site

Up to 0.01 kW VHF; up to 0.1 k/W UHF—2 miles (3.2 km) from transmitter site
Up to 0.1 kW VHF; up to 1 kW UHF—4 miles (6.4 km) from transmitter site

New applicants must submit the required information; they cannot rely on this table.

(2) The low power TV or TV translator station protected contour is calculated from the authorized effective radiated power and antenna height above average terrain, using Figure 9, 10, or 10b of § 73.699 (F(50,50) charts) of Part 73 of this chapter.

(b)(1) An application to construct a new low power TV, TV translator, or TV booster station or change the facilities of an existing station will not be accepted if it specifies a site which is within the protected contour of a co-channel or first adjacent channel low power TV, TV translator, or TV booster station, except that a TV booster station may be located within the protected contour of its co-channel primary station.

(2) Due to the frequency spacing which exists between TV Channels 4 and 5, between Channels 6 and 7, and between Channels 13 and 14, adjacent channel protection standards shall not be applicable to these pairs of channels. (See § 73.603(a) of Part 73 of this chapter.)

(3) A UHF low power TV, TV translator, or TV booster construction permit application will not be accepted if it specifies a site within the UHF low power TV, TV translator, or TV booster station's protected contour and proposes operation on a channel either 7 channels below or 14 or 15 channels above the channel in use by the low power TV, TV translator, or TV booster station.

(c) The low power TV, TV translator, or TV booster construction permit application field strength is calculated from the proposed effective radiated power (ERP) and the antenna above average terrain (HAAT) in pertinent directions.

(1) For co-channel protection, the field strength is calculated using Figure 9a, 10a, or 10c of § 73.699 (F(50,10) charts) of Part 73 of this chapter.

(2) For low power TV, TV translator, or TV booster applications that do not specify the same channel as the power TV, TV translator, or TV boo er station to be protected, the fi strength is calculated using Figure 10, or 10b of § 73.699 (F(50,50) char of Part 73 of this chapter.

(d) A low power TV, TV translat or TV booster station application not be accepted if the ratio in dB of field strength to that of the auth ized low power TV, TV translator, TV booster station at its protec contour fails to meet the following:

(1) −45 dB for co-channel operatio without offset carrier frequency op ation or −28 dB for offset carrier f quency operation. An application questing offset carrier frequency op ation must include the following:

(i) A requested offset designati (zero, plus, or minus) identifying proposed direction of the 10 k offset from the standard carrier f quencies of the requested channel. the offset designation is not differe from that of the station being prote ed, or if the station being protected not maintaining its frequencies with the tolerance specified in § 74.761 offset operation, the −45 dB ra must be used.

(ii) A description of the means which the low power TV, TV trans tor, or TV booster station's freque cies will be maintained within the t erances specified in § 74.761 for off operation.

(2) 6 dB when the protected l power TV or TV translator station erates on a VHF channel that is channel above the requested channe

(3) 12 dB when the protected l power TV or TV translator station erates on a VHF channel that is channel below the requested channe

(4) 15 dB when the protected l power TV or TV translator station erates on a UHF channel that is o channel above or below the request channel.

(5) 0 dB when the protected l power TV or TV translator station erates on a UHF channel that is sev channels above the requested chann

(6) 23 dB when the protected l power TV or TV translator station erates on a UHF channel that is fou teen channels below the request channel.

(7) 6 dB when the protected low power TV or TV translator station operates on a UHF channel that is fifteen channels below the requested channel.

[47 FR 21498, May 18, 1982, as amended at 47 FR 35990, Aug. 18, 1982; 48 FR 21487, May 12, 1983; 52 FR 31403, Aug. 20, 1987]

§ 74.709 Land mobile station protection.

(a) Stations in the Land Mobile Radio Service, using the following channels in the indicated cities will be protected from interference caused by low power TV or TV translator stations, and low power TV and TV translator stations must accept any interference from stations in the land mobile service operating on the following channels:

City	Channels	Coordinates	
		Latitude	Longitude
Boston, MA	14, 16	42°21′24″	071°03′24″
Chicago, IL	14, 15	41°52′28″	087°38′22″
Cleveland, OH	14, 15	41°29′51″	081°41′50″
Dallas, TX	16	32°47′09″	096°47′37″
Detroit, MI	15, 16	42°19′48″	083°02′57″
Houston, TX	17	29°45′26″	095°21′37″
Los Angeles, CA	14, 20	34°03′15″	118°14′28″
Miami, FL	14	25°46′37″	080°11′32″
New York, NY	14, 15	40°45′06″	073°59′39″
Philadelphia, PA	19, 20	39°56′58″	075°09′21″
Pittsburgh, PA	14, 18	40°26′19″	080°00′00″
San Francisco, CA	16, 17	37°46′39″	122°24′40″
Washington, DC	17, 18	38°53′51″	077°00′33″

(b) The protected contours for the land mobile radio service are 130 kilometers from the above coordinates, except where limited by the following:

(1) If the land mobile channel is the same as the channel in the following list, the land mobile protected contour excludes the area within 145 kilometers of the corresponding coordinates from list below. Except if the land mobile channel is 15 in New York or Cleveland or 16 in Detroit, the land mobile protected contour excludes the area within 95 kilometers of the corresponding coordinates from the list below.

(2) If the land mobile channel is one channel above or below the channel in the following list, the land mobile protected contour excludes the area within 95 kilometers of the corresponding coordinates from the list below.

City	Channel	Coordinates	
		Latitude	Longitude
San Diego, CA	15	32°41′48″	116°56′10″
Waterbury, CT	20	41°31′02″	073°01′00″
Washington, DC	14	38°57′17″	077°00′17″
Washington, DC	20	38°57′49″	077°06′18″
Champaign, IL	15	40°04′11″	087°54′45″
Jacksonville, IL	14	39°45′52″	090°30′29″
Ft. Wayne, IN	15	41°05′35″	085°10′42″
South Bend, IN	16	41°36′20″	086°12′44″
Salisbury, MD	16	38°24′15″	075°34′45″
Mt. Pleasant, MI	14	43°34′24″	084°46′21″
Hanover, NH	15	43°42′30″	072°09′16″
Canton, OH	17	40°51′04″	081°16′37″
Cleveland, OH	19	41°21′19″	081°44′24″
Oxford, OH	14	39°30′26″	084°44′09″
Zanesville, OH	18	39°55′42″	081°59′06″
Elmira-Corning, NY	18	42°06′20″	076°52′17″
Harrisburg, PA	21	40°20′44″	076°52′09″
Johnstown, PA	19	40°19′47″	078°53′45″
Lancaster, PA	15	40°15′45″	076°27′49″
Philadelphia, PA	17	40°02′30″	075°14′24″
Pittsburgh, PA	16	40°26′46″	079°57′51″
Scranton, PA	16	41°10′58″	075°52′21″
Parkersburg, WV	15	39°20′50″	081°33′56″
Madison, WI	15	43°03′01″	089°29′15″

(c) A low power TV or TV translator station application will not be accepted if it specifies a site that is within the protected contour of a co-channel or first adjacent channel land mobile assignment.

(d) The low power TV or TV translator station field strength is calculated from the proposed effective radiated power (ERP) and the antenna height above average terrain (HAAT) in pertinent directions.

(1) The field strength is calculated using Figure 10c of § 73.699 (F(50, 10) charts) of Part 73 of this chapter.

(2) A low power TV or TV translator station application will not be accepted if it specifies the same channel as one of the land mobile assignments and its field strength at the land mobile protected contour exceeds 52 dBu.

(3) A low power TV or TV translator station application will not be accepted if it specifies a channel that is one channel above or below one of the land mobile assignments and its field strength at the land mobile protected contour exceeds 76 dBu.

(e) To protect stations in the Offshore Radio Service, a low power TV or TV translator station construction permit application will not be accepted if it specifies operation on channels 15, 16, 17 or 18 in the following areas. West Longitude and North Latitude are abbreviated as W.L. and N.L. respectively.

(1) On Channel 15: west of 92°00′ W.L.; east of 98°30′ W.L.; and south of a line extending due west from 30°30′ N.L., 92°00′ W.L. to 30°30′ N.L., 96°00′ W.L.; and then due southwest to 28°00′ N.L., 98°30′ W.L.

(2) On Channel 16: west of 86°40′ W.L.; east of 96°30′ W.L.; and south of a line extending due west from 31°00′ N.L., 86°40′ W.L. to 31°00′ N.L., 95°00′ W.L. and then due southwest to 29°30′ N.L., 96°30′ W.L.

(3) On Channel 17: west of 86°30′ W.L.; east of 96°00′ W.L.; and south of a line extending due west from 31°00′ N.L., 86°30′ W.L. to 31°30′ N.L., 94°00′ W.L. and then due southwest to 29°30′ N.L., 96°00′ W.L.

(4) On Channel 18: west of 87°00′ W.L.; east of 95°00′ W.L.; and south of 31°00′ N.L.

[47 FR 21499, May 18, 1982, as amended at 50 FR 12027, Mar. 27, 1985; 50 FR 33942, Aug. 22, 1985]

§ 74.731 Purpose and permissible service.

(a) Television broadcast translator stations and television broadcast booster stations provide a means whereby the signals of television broadcast stations may be retransmitted to areas in which direct reception of such television broadcast stations is unsatisfactory due to distance or intervening terrain barriers.

(b) Except as provided in paragraph (f) of this section, a television broadcast translator station or television broadcast booster station may be used only to receive the signals of a television broadcast station, another television broadcast translator station, a television translator relay station, a television intercity relay station, a television STL station, or other suitable source such as a CARS or common carrier microwave station, for the simultaneous retransmission of the programs and signals of a television broadcast station. Such retransmissions may be accomplished by either:

(1) Reception of the television programs and signals of a television broadcast station directly through space, conversion to a different channel by simple heterodyne frequency conversion and suitable amplification; or,

(2) Modulation and amplification of a video and audio feed, in which case modulating equipment meeting the requirements of § 74.750(d) shall be used.

(c) The transmissions of each television broadcast translator station shall be intended for direct reception by the general public and any other use shall be incidental thereto. A television broadcast translator station shall not be operated solely for the purpose of relaying signals to one or more fixed receiving points for retransmission, distribution, or further relaying.

(d) The technical characteristics of the retransmitted signals shall not be deliberately altered so as to hinder reception on conventional television broadcast receivers.

(e) A television broadcast translator station shall not deliberately retransmit the signals of any station other than the station it is authorized by license to retransmit. Precautions shall be taken to avoid unintentional retransmission of such other signals.

(f) A locally generated radio frequency signal similar to that of a TV broadcast station and modulated with visual and aural information may be connected to the input terminals of a television broadcast translator or low power station for the purposes of transmitting still photographs, slides and voice announcements. The radio frequency signals shall be on the same channel as the normally used off-the-air signal being rebroadcast. When transmitting originations concerning financial support or public service announcements, connection of the locally generated signals shall be made automatically either by means of a time switch or upon receipt of a control signal from the TV station being rebroadcast designed to actuate the switching circuit. The switching circuit will be so designed that the input circuit will be returned to the off-the-air signal within 30 seconds. The connection for emergency transmissions may be made manually. The apparatus used to generate the local signal which is used to modulate the translator or low power station must be capable of producing a visual or aural signal or both which will provide acceptable reception on television receivers designed for the transmission standards employed by TV broadcast stations. The visual and aural materials so transmitted shall be limited to emergency warnings of imminent danger, to local public service announcements and to seeking or acknowledging financial support deemed necessary to the continued operation of the station. Accordingly, the originations concerning financial support and PSAs are limited to 30 seconds each, no more than once per hour. Acknowledgements of financial support may include identification of the contributors, the size and nature of the contribution and advertising messages of contributors. Emergency transmissions shall be no longer or more frequent than necessary to protect life and property.

(g) Low power TV stations may operate under the following modes of service:

(1) As a TV translator station, subject to the requirements of this part;

(2) For origination of programming and commercial matter as defined in § 74.701(f);

(3) For the transmission of subscription television broadcast (STV) programs, intended to be received in intelligible form by members of the public for a fee or charge subject to the provisions of §§ 73.642(e) and 73.644.

(h) A low power TV station may not be operated solely for the purpose of relaying signals to one or more fixed receiving points for retransmission, distribution or relaying.

(i) Low power TV stations are subject to no minimum required hours of operation and may operate in any of the 3 modes described in paragraph (g) of this section for any number of hours.

(j) Television broadcast booster stations provide a means whereby the licensee of a television broadcast station may provide service to areas of low signal strength in any region within the primary station's Grade B contour. The booster station may not be located outside the predicted Grade B of its primary station nor may the predicted Grade B signal of the television booster station extend beyond the predicted Grade B contour of the primary station. A television broadcast booster station is authorized to retransmit only the signals of its primary station; it shall not retransmit the signals of any other stations nor make independent transmissions. However, locally generated signals may be used to excite the booster apparatus for the purpose of conducting tests and measurements essential to the proper installation and maintenance of the apparatus.

(k) The transmissions of a television broadcast booster station shall be intended for direct reception by the general public. Such stations will not be permitted to establish a point-to-point television relay system.

[28 FR 13722, Dec. 14, 1963, as amended at 43 FR 1951, Jan. 13, 1978; 47 FR 21499, May 18, 1982; 47 FR 40172, Sept. 13, 1982; 48 FR 21487, May 12, 1983; 52 FR 31404, Aug. 20, 1987]

§ 74.732 Eligibility and licensing requirements.

(a) A license for a low power TV or TV translator station may be issued to any qualified individual, organized group of individuals, broadcast station licensee, or local civil governmental body.

(b) More than one low power TV or TV translator station may be licensed to the same applicant whether or not such stations serve substantially the same area. Low power TV and TV translator stations are not counted for purposes of § 73.3555, concerning multiple ownership.

(c) Only one channel will be assigned to each low power TV or TV translator station. Additional low power or translator stations may be authorized to provide additional reception. A separate application is required for each station and each application must be complete in all respects.

(d) The FCC will not act on applications for new low power TV or TV translator stations, for changes in facilities of existing stations, or for changes in output channel tendered by displaced stations pursuant to § 73.3572(a)(1), when such changes will result in a major change until the applicable time for filing a petition to deny has passed pursuant to § 73.3584(c).

(e) A proposal to change the primary TV station being retransmitted or an application of a licensed translator station to include low power TV station operation, i.e., program origination or subscription service will be subject only to a notification requirement.

(f) Applications for transfer of ownership or control of a low power TV or TV translator station will be subject to petitions to deny.

(g) A television broadcast booster station will be authorized only to the licensee or permittee of the television station whose signals the booster will rebroadcast, to areas within the Grade B contour of the primary station.

(h) No numerical limit is placed on the number of booster stations that may be licensed to a single licensee. A separate license is required for each television broadcast booster station.

[47 FR 21499, May 18, 1982, as amended at 48 FR 21487, May 12, 1983; 49 FR 20504, May 15, 1984; 52 FR 7423, Mar. 11, 1987; 52 FR 10571, Apr. 2, 1987; 52 FR 31404, Aug. 20, 1987]

§ 74.733 UHF translator signal boosters.

(a) The licensee of a UHF television broadcast translator station may be authorized to operate one or more signal boosters for the purpose of providing reception to small shadowed areas within the area intended to be served by the translator.

(b) The transmitting apparatus shall consist of a simple linear radio frequency amplifier, with one or more amplifying stages, which is capable of receiving, amplifying, and retransmitting the signals of the parent translator without significantly altering any electrical characteristic of the received signal other than its amplitude. The maximum power input to the plate of the final radio frequency amplifier shall not exceed 5 watts.

(c) The amplifier shall be equippe with suitable circuits which will automatically cause it to cease radiating i no signal is being received from th parent translator station. Care shal be taken in the design of the apparatus to insure that out-of-band radiation is not excessive and that adequate isolation is maintained betwee the input and output circuits to prevent unstable operation.

(d) The installation of the apparatu and its associated receiving and transmitting antennas shall be in accordance with accepted principles of goo engineering practice. Either horizontal, vertical, or circular polarization o the electric field of the radiated signa may be employed. If the isolation between the input and output circuit depends in part upon the polarizatio or directive properties of the transmitting and receiving antennas, the installation shall be sufficiently rugge to withstand the normal hazards of the environment.

(e) The operation of a UHF translator signal booster is subject to the condition that no harmful interference is caused to the reception of any station, broadcast or non-broadcast, other than the parent translator. The licensee of the UHF translator signal booster is expected to use reasonable diligence to minimize interference to the direct reception of the parent translator station.

(f) UHF translator signal boosters may be operated unattended. Repairs and adjustments shall be made by a qualified person. The required qualifications are set forth in § 74.750 (g) and (h).

(g) An individual call sign will not be assigned to a UHF translator booster station. The retransmission of the call sign of the parent translator will serve as station identification.

(h) Applications for authority to construct and operate a UHF translator signal booster shall be submitted on FCC Form 346A. No construction of facilities or installation of apparatus at the proposed transmitter site shall be made until a construction permit therefor has been issued by the Commission.

(i) The provisions of § 74.765 concerning posting of station license shal apply to a UHF translator signal booster except that the parent UHF translator call sign, followed by the word "Booster", shall be displayed at the signal booster site.

(j) The provisions of §§ 74.767 and 74.781 concerning marking and lighting of antenna structures and station records, respectively, apply to UHF translator signal boosters.

Note: Effective July 11, 1975, no new UHF signal boosters will be authorized. Licensees of such existing boosters may make application for renewal of license or change in facilities on the applicable FCC forms for Television Broadcast Translator Stations (Form 346, for construction permits; 347, for license to cover construction permit; and 348, for renewal of license). Report and Order, Docket No. 20372, May 28, 1975.

[28 FR 13722, Dec. 14, 1963, as amended at 40 FR 25022, June 12, 1975]

§ 74.734 Attended and unattended operation.

(a) In all circumstances other than during local origination (see § 74.701(h)), during which the operator must be in continuous attendance at the transmitter site, at a remote control point or at the program source, low power TV and TV translator stations may be operated without a licensed radio operator in attendance if the following requirements are met:

(1) If the transmitter site cannot be promptly reached at all hours and in all seasons, means shall be provided so that the transmitting apparatus can be turned on and off at will from a point that readily is accessible at all hours and in all seasons.

(2) The transmitter also shall be equipped with suitable automatic circuits that will place it in a nonradiating condition in the absence of a signal on the input channel or circuit.

(3) The transmitting and the ON/OFF control, if at a location other than the transmitter site, shall be adequately protected against tampering by unauthorized persons.

(4) The FCC shall be supplied with the name, address, and telephone number of a person or persons who may be called to secure suspension of operation of the transmitter promptly should such action be deemed necessary by the FCC. Such information shall be kept current by the licensee.

(5) In cases where the antenna and supporting structure are considered to be a hazard to air navigation and are required to be painted and lighted under the provisions of part 17 of the Rules, the licensee shall make suitable arrangements for the daily observations, when required, and lighting equipment inspections required by §§ 17.37 and 17.38 of the FCC rules.

(6) In the case of a low power TV or TV translator station using modulating equipment, observation of the transmitted program signal on a suitable receiver shall be made for at least 10 continuous minutes each day by a person designated by the licensee, who shall institute measures sufficient to assure prompt correction of any condition of improper operation that is observed.

(b) An application for authority to construct a new low power TV station (when rebroadcasting the programs of another station) or TV translator station or to make changes in the facilities of an authorized station, and that proposes unattended operation, shall include an adequate showing as to the manner of compliance with this section.

[47 FR 21500, May 18, 1982, as amended at 48 FR 21487, May 12, 1983]

§ 74.735 Power limitation.

(a) The power output of the final radio frequency amplifier of a VHF low power TV, TV translator, or TV booster station, except as provided for in paragraphs (d) and (f) of this section, shall not exceed 0.01 kW visual power. A UHF station shall be limited to a maximum of 1 kW peak visual power except as provided for in paragraph (f) of this section. In no event shall the transmitting apparatus be operated with a power output in excess of the manufacturer's rating.

(b) In individual cases, the FCC may authorize the use of more than one final radio frequency amplifier at a single VHF or UHF station under the following conditions:

(1) Each such amplifier shall be used to serve a different community or area More than one final radiofrequency

amplifier will not be authorized to provide service to all or a part of the same community or area.

(2) Each final radiofrequency amplifier shall feed a separate transmitting antenna or antenna array. The transmitting antennas or antenna arrays shall be so designed and installed that the outputs of the separate radiofrequency amplifiers will not combine to reinforce the signals radiated by the separate antennas or otherwise achieve the effect of radiated power in any direction in excess of that which could be obtained with a single antenna of the same design fed by a radiofrequency amplifier with power output no greater than that authorized pursuant to paragraph (a) of this section.

(3) A translator employing multiple final radiofrequency amplifiers will be licensed as a single station. The separate final radiofrequency amplifiers will not be licensed to different licensees.

(c) No limit is placed upon the effective radiated power that may be obtained by the use of horizontally or vertically polarized directive transmitting antennas, providing the provisions of §§ 74.705, 74.707 and 74.709 are met. Applications proposing the use of directional antenna systems must be accompanied by the following:

(1) Complete description of the proposed antenna system, including the manufacturer and model number of the proposed directional antenna. It is *not* acceptable to label the antenna with only a generic term such as "Yagi" or "Dipole". A specific model number must be provided. In the case of individually designed antennas with no model number, or in the case of a composite antenna composed of two or more individual antennas, the antenna should be described as a "custom" or "composite" antenna, as appropriate. A full description of the design of the antenna should also be submitted.

(2) Relative field horizontal plane pattern (horizontal polarization only) of the proposed directional antenna. A value of 1.0 should be used for the maximum radiation. The plot of the pattern should be oriented so that 0° corresponds to the maximum radiation of the directional antenna or, alternatively in the case of a symmetrical pattern, to the line of symmetry. The on the plot should be referenced the actual azimuth with respect true North.

(3) A tabulation of the relative fiel pattern required in paragraph (c)(2 of this section. The tabulation shoul use the same zero degree reference the plotted pattern, and be tabulate at least every 10°. In addition, tabula ed values of all maximas and minima with their corresponding azimuth should be submitted.

(4) All horizontal plane pattern must be plotted to the largest scal possible on unglazed letter-size pola coordinate paper (main engraving ap proximately 7" x 10") using only scal divisions and subdivisions of 1, 2, 2.5 or 5 times 10-nth. Values of fiel strength on any pattern less than 10% of the maximum field strength plotte on that pattern must be shown on a enlarged scale.

(5) The horizontal plane pattern that are required are the patterns fo the complete directional antenn system. In the case of a composite an tenna composed of two or more indi vidual antennas, this means that th patterns for the composite antenn composed of two or more individua antennas, not the patterns for each of the individual antennas, must be submitted.

(d) VHF low power TV, TV translator, and TV booster stations authorized on channels listed in the TV table of allocations (see § 73.606(b) of Part 73 of this chapter) will be authorized a maximum output power of the radio frequency amplifier of 0.1 kW peak visual power.

(e) The power output of the final radio amplifier of a VHF or UHF transmitter may be fed into a single transmitting antenna, or may be divided between two or more transmitting antennas or antenna arrays in any manner found useful or desirable by the licensee.

(f) A station proposing to use antenna(s) designed for circularly polarized radiation may be authorized to use a type accepted transmitter or parallel connected of two type accepted translator amplifiers to operate at peak visual output power of twice that specified under the maximum transmitter power limitations given above in this section.

[30 FR 8847, July 14, 1965, as amended at 41 FR 28267, July 9, 1976; 47 FR 21500, May 18, 1982; 48 FR 21487, May 12, 1983; 52 FR 7423, Mar. 11, 1987; 52 FR 31404, Aug. 20, 1987]

§ 74.736 Emissions and bandwidth.

(a) The license of a low power TV, TV translator, or TV booster station authorizes the transmission of the visual signal by amplitude modulation (A5) and the accompanying aural signal by frequency modulation (F3).

(b) Standard width television channels will be assigned and the transmitting apparatus shall be operated so as to limit spurious emissions to the lowest practicable value. Any emissions including intermodulation products and radio frequency harmonics which are not essential for the transmission of the desired picture and sound information shall be considered to be spurious emissions.

(c) Any emissions appearing on frequencies more than 3 MHz above or below the upper and lower edges, respectively, of the assigned channel shall be attenuated no less than:

(1) 30 dB for transmitters rated at no more than 1 watt power output.

(2) 50 dB for transmitters rated at more than 1 watt power output.

(3) 60 dB for transmitters rated at more than 100 watts power output.

(d) Greater attenuation than that specified in paragraph (c) of this section may be required if interference results from emissions outside the assigned channel.

[28 FR 13722, Dec. 14, 1963, as amended at 33 FR 8677, June 13, 1968; 36 FR 19592, Oct. 8, 1971; 47 FR 21500, May 18, 1982; 52 FR 31404, Aug. 20, 1987]

§ 74.737 Antenna location.

(a) An applicant for a new low power TV, TV translator, or TV booster station or for a change in the facilities of an authorized station shall endeavor to select a site that will provide a line-of-sight transmission path to the entire area intended to be served and at which there is available a suitable signal from the primary station, if any, that will be retransmitted.

(b) The transmitting antenna should be placed above growing vegetation and trees lying in the direction of the area intended to be served, to minimize the possibility of signal absorption by foliage.

(c) A site within 8 kilometers of the area intended to be served is to be preferred if the conditions in paragraph (a) of this section can be met.

(d) Consideration should be given to the accessibility of the site at all seasons of the year and to the availability of facilities for the maintenance and operation of the transmitting equipment.

(e) The transmitting antenna should be located as near as is practical to the transmitter to avoid the use of long transmission lines and the associated power losses.

(f) Consideration should be given to the existence of strong radio frequency fields from other transmitters at the site of the transmitting equipment and the possibility that such fields may result in the retransmissions of signals originating on frequencies other than that of the primary station being rebroadcast.

[47 FR 21500, May 18, 1982, as amended at 52 FR 31404, Aug. 20, 1987]

§ 74.750 Transmission system facilities.

(a) Applications for new low power TV, TV translator, and TV booster stations and for increased transmitter power for previously authorized facilities will not be accepted unless the transmitter is listed in the FCC's list of equipment type accepted for licensing under the provisions of this subpart.

(b) Transmitting antennas, antennas used to receive the signals to be rebroadcast, and transmission lines are not type accepted by the FCC. External preamplifiers also may be used provided that they do not cause improper operation of the transmitting equipment, and use of such preamplifiers is not necessary to meet the provisions of paragraph (c) of this section.

(c) The following requirements must be met before low power TV and TV translator transmitters will be type accepted by the FCC:

(1) The equipment shall be so designed that the electrical characteristics of a standard television signal introduced into the input terminals will be maintained at the output. The overall response of the apparatus within its assigned channel, when operating at its rated power output and measured at the output terminals, shall provide a smooth curve, varying within limits separated by no more than 4 dB: *Provided, however,* That means may be provided to reduce the amplitude of the aural carrier below those limits, if necessary to prevent intermodulation which would mar the quality of the retransmitted picture or result in emissions outside of the assigned channel.

(2) Radio frequency harmonics of the visual and aural carriers, measured at the output terminals of the transmitter, shall be attenuated no less than 60 dB below the peak visual output power within the assigned channel. All other emissions appearing on frequencies more than 3 megacycles above or below the upper and lower edges, respectively, of the assigned channel shall be attenuated no less than:

(i) 30 dB for transmitters rated at no more than 1 watt power output.

(ii) 50 dB for transmitters rated at more than 1 watt power output.

(iii) 60 dB for transmitters rated at more than 100 watts power output.

(3) When subjected to variations in ambient temperature between minus 30 degrees and plus 50 degrees Centigrade and variations in power main voltage between 85 percent and 115 percent of rated power supply voltage, the local oscillator frequency stability shall maintain the operating frequency within:

(i) 0.02 percent of its rated frequency for transmitters rated at no more than 100 watts peak visual power.

(ii) 0.002 percent of the rated frequency for transmitters rated at more than 100 watts peak visual power.

(iii) Plus or minus 1 kHz of its rated frequency for transmitters to be used at stations employing offset carrier frequency operation.

(4) The apparatus shall contain automatic circuits which will maintain the peak visual power output constant within 2 dB when the strength of th input signal is varied over a range 30 dB and which will not permit th peak visual power output to excee the maximum rated power outpu under any condition. If a manual a justment is provided to compensat for different average signal strength provision shall be made for determin ing the proper setting for the contro and if improper adjustment of th control could result in improper oper ation, a label shall be affixed at th adjustment control bearing a suitabl warning.

(5) The apparatus must be equippe with automatic controls that will plac it in a non-radiating condition whe no signal is being received on th input channel, either due to absenc of a transmitted signal or failure o the receiving portion of the facilitie used for rebroadcasting the signal o another station. The automatic control may include a time delay featur to prevent interruptions caused by fading or other momentary failures of the incoming signal.

(6) The tube or tubes employed in the final radio frequency amplifier shall be of the appropriate power rating to provide the rated power output of the translator. The normal operating constants for operation at the rated power output shall be specified. The apparatus shall be equipped with suitable meters or meter jacks so that appropriate voltage and current measurements may be made while the apparatus is in operation.

(7) The transmitters of over 0.001 kW peak visual power (0.002 kW when circularly polarized antennas are used) shall be equipped with an automatic keying device that will transmit the call sign of the station, in International Morse Code, at least once each hour during the time the station is in operation when operating in the translator mode retransmitting the programming of a TV broadcast station. However, the identification by Morse Code is not required if the licensee of the low power TV or TV translator station has an agreement with the TV broadcast station being rebroadcast to transmit aurally or visually the low power TV or TV translator station call as provid-

ed for in § 74.783. Transmission of the call sign can be accomplished by:

(i) Frequency shift keying; the aural and visual carrier shift shall not be less than 5 kHz or greater than 25 kHz.

(ii) Amplitude modulation of the aural carrier of at least 30% modulation. The audio frequency tone used shall not be within 200 hertz of the Emergency Broadcast System Attention Signal alerting frequencies.

(8) Wiring, shielding, and construction shall be in accordance with accepted principles of good engineering practice.

(d) Low power TV, TV translator and transmitting equipment using a modulation process for either program origination or rebroadcasting TV booster transmitting equipment using a modulation process must meet the following requirements:

(1) The equipment shall meet the requirements of paragraphs (a)(1) and (b)(3) of § 73.687.

(2) The stability of the equipment shall be sufficient to maintain the operating frequency of the aural carrier to 4.5 MHz ± 1kHz above the visual carrier when subjected to variations in ambient temperature between 30° and +50° centigrade and variations in power main voltage between 85 and 115 percent of rated power supply voltage.

(e) Type acceptance will be granted only upon a satisfactory showing that the apparatus is capable of meeting the requirements of paragraphs (c) and (d) of this section. The following procedures shall apply:

(1) Any manufacturer of apparatus intended for use at low power TV, TV translator, or TV booster stations may request type acceptance by following the procedures set forth in part 2, subpart J, of this chapter. Equipment found to be acceptable by the FCC will be listed in the "Radio Equipment List" published by the FCC. These lists are available for inspection at the FCC headquarters in Washington, DC or at any of its field offices.

(2) Low power TV, TV translator, and TV booster transmitting apparatus that has been type accepted by the FCC will normally be authorized without additional measurements from the applicant or licensee.

(3) Applications for type acceptance of modulators to be used with existing type accepted TV translator apparatus must include the specifications electrical and mechanical interconnecting requirements for the apparatus with which it is designed to be used.

(4) Other rules concerning type acceptance, including information regarding withdrawal of type acceptance, modification of type accepted equipment and limitations on the findings upon which type acceptance is based, are set forth in part 2, subpart J, of this chapter.

(f) The transmitting antenna system may be designed to produce horizontal, vertical, or circular polarization.

(g) Low power TV, TV translator, or TV booster stations installing new type accepted transmitting apparatus incorporating modulating equipment need not make equipment performance measurements and shall so indicate on the station license application. Stations adding new or replacing modulating equipment to existing low power, TV translator, or TV booster station transmitting apparatus must have a qualified operator (§ 74.18) examine the transmitting system after installation. This operator must certify in the application for the station license that the transmitting equipment meets the requirement of paragraph (d)(1) of this section. A report of the methods, measurements, and results must be kept in the station records. However, stations installing modulating equipment solely for the limited local origination of signals permitted by § 74.731 need not comply with the requirements of this paragraph.

[28 FR 13722, Dec. 14, 1963, as amended at 33 FR 8677, June 13, 1968; 36 FR 19592, Oct. 8, 1971; 37 FR 25844, Dec. 5, 1972; 41 FR 17552, Apr. 27, 1976; 43 FR 1951, Jan. 13, 1978; 46 FR 35465, July 8, 1981; 47 FR 21500, May 18, 1982; 47 FR 30496, July 14, 1982; 52 FR 31404, Aug. 20, 1987]

§ 74.751 Modification of transmission systems.

(a) No change, either mechanical or electrical, may be made in apparatus which has been type accepted by the Commission without prior authority of the Commission. If such prior authority has been given to the manufacturer of type accepted equipment, the manufacturer may issue instructions for such changes citing its authority. In such cases, individual licensees are not required to secure prior Commission approval but shall notify the Commission when such changes are completed.

(b) Formal application (FCC Form 346) is required for any of the following changes:

(1) Replacement of the transmitter as a whole, except replacement with a transmitter of identical power rating which has been type accepted by the FCC for use by low power TV, TV translator, and TV booster stations, or any change which could result in a change in the electrical characteristics or performance of the station.

(2) Any change in the transmitting antenna system, including the direction of radiation, directive antenna pattern, antenna gain, transmission line loss characteristics, or height of antenna center of radiation.

(3) Any change in the overall height of the antenna structure, except where notice to the Federal Aviation Administration is specifically not required under § 17.14(b) of this chapter.

(4) Any horizontal change of the location of the antenna structure which would (i) be in excess of 152.4 meters (500 feet), or (ii) require notice to the Federal Aviation Administration pursuant to § 17.7 of the FCC's Rules.

(5) A change in frequency assignment.

(6) Any changes in the location of the transmitter except within the same building or upon the same pole or tower.

(7) A change of authorized operating power.

(c) Other equipment changes not specifically referred to in paragraphs (a) and (b) of this section may be made at the discretion of the licensee, provided that the FCC in Washington, DC notified in writing upon completion of such changes.

(d) Upon installation of new or replacement transmitting equipment for which prior FCC authority is not required under the provisions of this section, the licensee must place in the station records a certification that the new installation complies in all respects with the technical requirements of this part and the station authorization.

[28 FR 13722, Dec. 14, 1963, as amended at 38 FR 6827, Mar. 13, 1973; 39 FR 38652, Nov. 1, 1974; 45 FR 26067, Apr. 17, 1980; 47 FR 21501, May 18, 1982; 48 FR 41423, Sept. 15, 1983; 50 FR 23710, June 5, 1985; 52 FR 31405, Aug. 20, 1987]

§ 74.761 Frequency tolerance.

The licensee of a low power TV, TV translator, or TV booster station shall maintain the transmitter output frequencies as set forth below. The frequency tolerance of stations using direct frequency conversion of a received signal and not engaging in offset carrier operation as set forth in paragraph (d) of this section will be referenced to the authorized plus or minus 10 kHz offset, if any, of the primary station.

(a) The visual carrier shall be maintained to within 0.02 percent of the assigned visual carrier frequency for transmitters rated at not more than 100 watts peak visual power.

(b) The visual carrier shall be maintained to within 0.002 percent of the assigned visual carrier frequency for transmitters rated at more than 100 watts peak visual power.

(c) The aural carrier of stations employing modulating equipment shall be maintained at 4.5 MHz ± 1 kHz above the visual carrier frequency.

(d) The visual carrier shall be maintained to within 1 kHz of the assigned channel carrier frequency if the low power TV, TV translator, or TV booster station is authorized with a specified offset designation in order to provide protection under the provisions of § 74.705 or § 74.707.

[43 FR 1952, Jan. 13, 1978, as amended at 52 FR 31405, Aug. 20, 1987]

§ 74.762 Frequency measurements.

(a) The licensee of a low power TV station, a TV translator, or a TV booster station must measure the carrier frequencies of its output channel as often as necessary to ensure operation within the specified tolerances.

and at least once each calendar year at intervals not exceeding 14 months.

(b) In the event that a low power TV, TV translator, or TV booster station is found to be operating beyond the frequency tolerance prescribed in § 74.761, the licensee promptly shall suspend operation of the transmitter and shall not resume operation until transmitter has been restored to its assigned frequencies. Adjustment of the frequency determining circuits of the transmitter shall be made only by a qualified person in accordance with § 74.750(g).

[52 FR 31405, Aug. 20, 1987]

§ 74.763 Time of operation.

(a) A low power TV, TV translator, or TV booster station is not required to adhere to any regular schedule of operation. However, the licensee of a TV translator or TV booster station is expected to provide service to the extent that such is within its control and to avoid unwarranted interruptions in the service provided.

(b) In the event that causes beyond the control of the low power TV or TV translator station licensee make it impossible to continue operating, the station may discontinue operation for a period of not more than 30 days without further authority from the FCC. Notification must be sent to the FCC in Washington, DC not later than the 10th day of discontinued operation. During such period, the licensee shall continue to adhere to the requirements in the station license pertaining to the lighting of antenna structures. In the event normal operation is restored prior to the expiration of the 30 days period, the licensee will so notify the FCC of this date in writing. If the causes beyond the control of the licensee make it impossible to comply within the allowed period, informal written request shall be made to the FCC no later than the 30th day for such additional time as may be deemed necessary.

(c) Failure of a low power TV, TV translator, or TV booster station to operate for a period of 30 days or more, except for causes beyond the control of the licensee, shall be deemed evidence of discontinuation of operation and the license of the station may be cancelled at the discretion of the FCC.

(d) A television broadcast translator station shall not be permitted to radiate during extended periods when signals of the primary station are not being retransmitted.

[28 FR 13722, Dec. 14, 1963, as amended at 52 FR 7423, Mar. 11, 1987; 52 FR 31405, Aug. 20, 1987]

§ 74.765 Posting of station and operator licenses.

(a) The station license and any other instrument of authorization or individual order concerning the construction of the station or manner of operation shall be kept in the station record file so as to be available for inspection upon request of authorized representatives of the FCC.

(b) The licenses or permits of operators employed at low power TV stations locally originating programs (as defined by § 74.701(h)) shall be posted in accordance with the provisions of § 73.1230(b).

(c) The call sign of the station, together with the name, address, and telephone number of the licensee or local representative of the licensee, if the licensee does not reside in the community served by the station, and the name and address of the person and place where the station records are maintained, shall be displayed at the transmitter site on the structure supporting the transmitting antenna, so as to be visible to a person standing on the ground. The display shall be maintained in legible condition by the licensee.

[47 FR 21502, May 18, 1982, as amended at 52 FR 7423, Mar. 11, 1987]

§ 74.769 Copies of rules.

The licensee or permittee of a station authorized under this subpart shall have a current copy of Volume I and Volume III of the Commission's Rules and shall make them available for use by the operator in charge. Each such licensee or permittee shall be familiar with those rules relating to stations authorized under this subpart. Copies of the Commission's rules may be obtained from the Superintendent of Documents, Government

Printing Office, Washington, DC 20402.

[40 FR 54794, Nov. 26, 1975]

§ 74.780 Broadcast regulations applicable to translators, low power, and booster stations.

The following rules are applicable to TV translator, low power TV, and TV booster stations:

Section 73.653—Operation of TV aural and visual transmitters.

Section 73.658—Affiliation agreements and network program practices; territorial exclusivity in non-network program arrangements.

Part 73, Subpart G—Emergency Broadcast System (for low power TV stations locally originating programming as defined by § 74.701(h)).

Section 73.1201—Station identification (for low power TV stations locally originating programming as defined by § 74.701(h)).

Section 73.1206—Broadcast of telephone conversations.

Section 73.1207—Rebroadcasts.

Section 73.1208—Broadcast of taped, filmed or recorded material.

Section 73.1211—Broadcast of lottery information.

Section 73.1212—Sponsorship identifications; list retention, related requirements.

Section 73.1216—Licensee conducted contests.

Section 73.1510—Experimental authorizations.

Section 73.1515—Special field test authorizations.

Section 73.1615—Operation during modifications of facilities.

Section 73.1635—Special temporary authorizations (STA).

Section 73.1650—International broadcasting agreements.

Section 73.1680—Emergency antennas.

Section 73.1940—Broadcasts by candidates for public office.

Section 73.2080—Equal employment opportunities (for low power TV stations only).

Section 73.3500—Application and report forms.

Section 73.3511—Applications required.

Section 73.3512—Where to file; number of copies.

Section 73.3513—Signing of applications.

Section 73.3514—Content of applications.

Section 73.3516—Specification of facilities.

Section 73.3517—Contingent applications.

Section 73.3518—Inconsistent or conflicting applications.

Section 73.3519—Repetitious applications.

Section 73.3521—Mutually exclusive applications for low power TV and TV translator stations.

Section 73.3522—Amendment of appli tions.

Section 73.3525 (a), (b), (d), (f), (h) a (i)—Agreements for removing applicati conflicts.

Section 73.3533—Application for constr tion permit or modification of constructi permit.

Section 73.3534—Application for extensi of construction permit or for constructi permit to replace expired constructi permit.

Section 73.3536—Application for license cover construction permit.

Section 73.3538 (a)(1)(3)(4), (b)(2)—App cation to make changes in existing station

Section 73.3539—Application for renew of iicense.

Section 73.3540—Application for volu tary assignment of transfer of control.

Section 73.3541—Application for involu tary assignment or transfer of control.

Section 73.3542—Application for emerge cy authorization.

Section 73.3544—Application to obtain modified station license.

Section 73.3545—Application for permit deliver programs to foreign stations.

Section 73.3561—Staff consideration of a plications requiring Commission action.

Section 73.3562—Staff consideration of a plications not requiring action by the Co mission.

Section 73.3564—Acceptance of applic tions.

Section 73.3566—Defective applications.

Section 73.3568—Dismissal of applicatio

Section 73.3572—Processing of TV broa cast, low power TV, and TV translator st tion applications.

Section 73.3580—Local public notice filing of broadcast applications.

Section 73.3584—Petitions to deny.

Section 73.3587—Informal objections.

Section 73.3591—Grants without hearing.

Section 73.3593—Designation for hearing.

Section 73.3594—Local public notice designation for hearing.

Section 73.3597—Procedures on transfe and assignment applications.

Section 73.3598—Period of construction.

Section 73.3599—Forfeiture of construc tion permit.

Section 73.3601—Simultaneous modifica tion and renewal of license.

Section 73.3603—Special waiver procedur relative to applications.

Section 73.3612—Annual employmen report (for low power TV stations only).

Section 73.3613—Filing of contracts (net work affiliation contracts for low power T stations only).

[52 FR 7423, Mar. 11, 1987, as amended a 52 FR 25867, July 9, 1987; 52 FR 31405, Au 20, 1987]

§ 74.781 Station records.

(a) The licensee of a low power TV, TV translator, or TV booster station shall maintain adequate station records, including the current instrument of authorization, official correspondence with the FCC, contracts, permission for rebroadcasts, and other pertinent documents.

(b) Entries required by § 17.49 of this Chapter concerning any observed or otherwise known extinguishment or improper functioning of a tower light:

(1) The nature of such extinguishment or improper functioning.

(2) The date and time the extinguishment or improper operation was observed or otherwise noted.

(3) The date, time and nature of adjustments, repairs or replacements made.

(c) The station records shall be maintained for inspection at a residence, office, or public building, place of business, or other suitable place, in one of the communities of license of the translator or booster, except that the station records of a booster or translator licensed to the licensee of the primary station may be kept at the same place where the primary station records are kept. The name of the person keeping station records, together with the address of the place where the records are kept, shall be posted in accordance with § 74.765(c) of the rules. The station records shall be made available upon request to any authorized representative of the Commission.

(d) Station logs and records shall be retained for a period of two years.

[48 FR 44806, Sept. 30, 1983, as amended at 52 FR 31405, Aug. 20, 1987]

§ 74.783 Station identification.

(a) Each low power TV and TV translator station not originating local programming as defined by § 74.701(h) operating over 0.001 kw peak visual power (0.002 kw when using circularly polarized antennas) must transmit its station identification as follows:

(1) By transmitting the call sign in International Morse Code at least once each hour. This transmission may be accomplished by means of an automatic device as required by § 74.750(c)(7). Call sign transmission shall be made at a code speed not in excess of 20 words per minute; or

(2) By arranging for the primary station, whose signal is being rebroadcast, to identify the translator station by transmitting an easily readable visual presentation or a clearly understandable aural presentation of the translator station's call letters and location. Two such identifications shall be made between 7 a.m. and 9 a.m. and 3 p.m. and 5 p.m. each broadcast day at approximately one hour intervals during each time period. Television stations which do not begin their broadcast day before 9 a.m. shall make these identifications in the hours closest to these time periods at the specified intervals.

(b) Licensees of television translators whose station identification is made by the television station whose signals are being rebroadcast by the translator, must secure agreement with this television station licensee to keep in its file, and available to FCC personnel, the translator's call letters and location, giving the name, address and telephone number of the licensee or his service representative to be contacted in the event of malfunction of the translator. It shall be the responsibility of the translator licensee to furnish current information to the television station licensee for this purpose.

(c) A low power TV station shall comply with the station identification procedures given in § 73.1201 when locally originating programming, as defined by § 74.701(h). The identification procedures given in paragraphs (a) and (b) are to be used at all other times.

(d) Call signs for low power TV and TV translator stations will be made up of the initial letter K or W followed by the channel number assigned to the station and two additional letters. The use of the initial letter generally will follow the pattern used in the broadcast service, i.e., stations west of the Mississippi River will be assigned an initial letter K and those east, the letter W. The two letter combinations following the channel number will be assigned in order and requests for the assignment of the particular combinations of letters will not be considered.

The channel number designator for Channels 2 through 9 will be incorporated in the call sign as a 2-digit number, i.e., 02, 03, ..., so as to avoid similarities with call signs assigned to amateur radio stations.

(e) TV broadcast booster station shall be identified by their primary stations by broadcasting of the primary station's call letters and location in accordance with the provisions of § 73.1201 of this chapter.

[41 FR 17552, Apr. 27, 1976, as amended at 47 FR 21502, May 18, 1982; 52 FR 7424, Mar. 11, 1987; 52 FR 31405, Aug. 20, 1987]

§ 74.784 Rebroadcasts.

(a) The term "rebroadcast" means the reception by radio of the programs or other signals of a radio or television station and the simultaneous or subsequent retransmission of such programs or signals for direct reception by the general public.

(b) The licensee of a low power TV or TV translator station shall not rebroadcast the programs of any other TV broadcast station or other station authorized under the provisions of this Subpart without obtaining prior consent of the station whose signals or programs are proposed to be retransmitted. The FCC shall be notified of the call letters of each station rebroadcast and the licensee of the low power TV or TV broadcast translator station shall certify that written consent has been obtained from the licensee of the station whose programs are retransmitted.

(c) A TV translator station may rebroadcast only programs and signals that are simultaneously transmitted by a TV broadcast station.

(d) A TV booster station may rebroadcast only programs and signals that are simultaneously transmitted by the primary station to which it is authorized.

(e) The provisions of § 73.1207 of part 73 of this chapter apply to low power TV stations in transmitting any material during periods of program origination obtained from the transmissions of any other type of station.

(Sec. 325, 48 Stat. 1091; 47 U.S.C. 325)

[28 FR 13722, Dec. 14, 1963, as amended at 47 FR 21502, May 18, 1982; 52 FR 31405, Aug. 20, 1987]

Subpart H—Low Power Auxiliary Stations

§ 74.801 Definitions.

Cable television system operator. A cable television operator is defined in § 76.5(cc) of the rules.

Low power auxiliary station. An auxiliary station authorized and operated pursuant to the provisions set forth in this subpart. Devices authorized as low power auxiliary stations are intended to transmit over distances of approximately 100 meters for uses such as wireless microphones, cue and control communications, and synchronization of TV camera signals.

Motion picture producer. Motion picture producer refers to a person or organization engaged in the production or filming of motion pictures.

Television program producer. Television program producer refers to a person or organization engaged in the production of television programs.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[42 FR 14729, March 16, 1977, as amended at 43 FR 14662, Apr. 7, 1978; 51 FR 4603, Feb. 6, 1986; 51 FR 9966, Mar. 24, 1986; 54 FR 41842, Oct. 12, 1989]

§ 74.802 Frequency assignment.

(a) Frequencies within the following bands may be assigned for use by low power auxiliary stations:

26.100-26.480 MHz
54.000-72.000 MHz
76.000-88.000 MHz
161.625-161.775 MHz (except in Puerto Rico or the Virgin Islands)
174.000-216.000 MHz
450.000-451.000 MHz
455.000-456.000 MHz
470.000-488.000 MHz
488.000-494.000 MHz (except Hawaii)
494.000-608.000 MHz
614.000-806.000 MHz
944.000-952.000 MHz

(b) Operations in the bands allocated for TV broadcasting, listed below, are limited to locations removed from existing co-channel TV broadcast stations by not less than the following distances unless otherwise authorized by the FCC. (See § 73.609 for zone definitions.)

(1) 54.000-72.000 MHz and 76.000-88.000 MHz:

Zone I 105 km (65 miles)
Zones II and III 129 km (80 miles)

(2) 174.000-216.000 MHz

Zone I 97 km (60 miles)
Zones II and III 129 km (80 miles)

(3) 480.000-608.000 MHz and 614.000—806.000 MHz

All zones 113 km (70 miles)

(c) Specific frequency operation is required when operating within the bands allocated for TV broadcasting.

(1) The frequency selection shall be offset from the upper or lower band limits by 25 kHz or an integral multiple thereof.

(2) One or more adjacent 25 kHz segments within the assignable frequencies may be combined to form a channel whose maximum bandwidth shall not exceed 200 kHz.

(d) Low power auxiliary licensees will not be granted exclusive frequency assignments.

[52 FR 2535, Jan. 23, 1987]

§ 74.803 Frequency selection to avoid interference.

(a) Where two or more low power auxiliary licensees need to operate in the same area, the licensees shall endeavor to select frequencies or schedule operation in such manner as to avoid mutual interference. If a mutually satisfactory arrangement cannot be reached, the Commission shall be notified and it will specify the frequency or frequencies to be employed by each licensee.

(b) The selection of frequencies in the bands allocated for TV broadcasting for use in any area shall be guided by the need to avoid interference to TV broadcast reception. In these bands, low power auxiliary station usage is secondary to TV broadcasting and land mobile stations operating in the UHF-TV spectrum and must not cause harmful interference. If such interference occurs, low power auxiliary station operation must immediately cease and may not be resumed until the interference problem has been resolved.

[42 FR 14729, Mar. 16, 1977, as amended at 52 FR 2535, Jan. 23, 1987]

§ 74.831 Scope of service and permissible transmissions.

The license for a low power auxiliary station authorizes the transmission of cues and orders to production personnel and participants in broadcast programs and motion pictures and in the preparation therefor, the transmission of program material by means of a wireless microphone worn by a performer and other participants in a program or motion picture during rehearsal and during the actual broadcast, filming, or recording, or the transmission of comments, interviews, and reports from the scene of a remote broadcast. Low power auxiliary stations operating in the 944-952 MHz band may, in addition, transmit synchronizing signals and various control signals to portable or hand-carried TV cameras which employ low power radio signals in lieu of cable to deliver picture signals to the control point at the scene of a remote broadcast.

[42 FR 14729, Mar. 16, 1977, as amended at 51 FR 4603, Feb. 6, 1986]

§ 74.832 Licensing requirements and procedures.

(a) A license authorizing operation of one or more low power auxiliary stations will be issued only to the following:

(1) A licensee of an AM, FM, TV, or International broadcast station or low power TV station. Low power auxiliary stations will be licensed for used with a specific broadcast or low power TV station or combination of stations licensed to the same licensee within the same community.

(2) A broadcast network entity.

(3) A cable television system operator who operates a cable system that produces program material for origination or access cablecasting, as defined in § 76.5(r).

(4) Motion picture producers as defined in § 74.801.

(5) Television program producers as defined in § 74.801.

(b) An application for a new or renewal of low power auxiliary license shall specify the frequency band or bands desired. Only those frequency bands necessary for satisfactory operation shall be requested.

(c) Licensees of AM, FM, TV, and International broadcast stations; low power TV stations; and broadcast network entities may be authorized to operate low power auxiliary stations in the frequency bands set forth in § 74.802(a).

(d) Cable television operations, motion picture and television program producers may be authorized to operate low power auxiliary stations only in the bands allocated for TV broadcasting.

(e) An application for low power auxiliary stations or for a change in an existing authorization shall specify the broadcast station, combination of such stations, or the network with which the low power broadcast auxiliary facilities are to be principally used as given in paragraph (h) of this section; or it shall specify the motion picture or television production company or the cable television operator with which the low power broadcast auxiliary facilities are to be solely used. A single application, filed in duplicate on FCC Form 313 may be used in applying for the authority to operate one or more low power auxiliary units. The application must specify the number of units to be operated and the frequency bands which will be used. Motion picture producers, television program producers, and cable television operators are required to attach a single sheet to their application form explaining in detail the manner in which the eligibility requirements given in paragraph (a) of this section are met.

(f) Applications for the use of the bands allocated for TV broadcasting must specify the usual area of operation within which the low power auxiliary station will be used. This area of operation may, for example, be specified as the metropolitan area in which the broadcast licensee serves, or the usual area within which motion picture and television producers are operating. Because low power auxiliary stations operating in these bands will only be permitted in areas removed from existing co-channel TV broadcast stations, licensees have full responsibility to ensure that operation of their stations does not occur at distances less than those specified in § 74.802(b).

(g) Low power auxiliary licenses will specify the minimum and maximum number of units that may be operated as follows: from 1 to 5 stations; from 4 to 12 stations; from 10 to 24 stations; from 20 to 50 stations; 45 or more stations.

(h) For broadcast licensees, low power auxiliary stations will be licensed for use with a specific broadcast station or combination of broadcast stations licensed to the same licensee and to the same community. Licensing of low power auxiliary stations for use with a specific broadcast station or combination of such stations does not preclude their use with other broadcast stations of the same or a different licensee at any location. Operation of low power auxiliary stations outside the area of operation specified in the authorization, or in other bands is permitted without further authority of the Commission. However, operation of low power auxiliary stations shall, at all times, be in accordance with the requirements of § 74.882 of this subpart. Also, a low power auxiliary station that is being used with a broadcast station or network other than one with which it is licensed, must, in addition to meeting the requirements of § 74.861 of this subpart, not cause harmful interference to another low power auxiliary station which is being used with the broadcast station(s) or network with which it is licensed.

(i) In the case of permanent discontinuance of operation of a station licensed under this subpart, the licensee shall forward the station license to the Commission in Washington for cancellation. For purposes of this section, a station which is not operated for a period of one year is considered to have been permanently discontinued.

(j) The license shall be retained in the licensee's files at the address shown on the authorization, posted at the transmitter, or posted at the control point of the station.

[42 FR 14729, Mar. 16, 1977, as amended at 47 FR 9221, Mar. 4, 1982; 47 FR 21503, May 18, 1982; 47 FR 55938, Dec. 14, 1982; 51 FR 4603, Feb. 6, 1986; 51 FR 9966, Mar. 24, 1986; 52 FR 2535, Jan. 23, 1987]

§ 74.833 Temporary authorizations.

(a) Special temporary authority may be granted for low power auxiliary station operation which cannot be conducted in accordance with § 74.24. Such authority will normally be granted only for operations of a temporary nature. Where operation is seen as likely on a continuing annual basis, an application for a regular authorization should be submitted.

(b) A request for special temporary authority for the operation of a low power auxiliary station may be made by informal application, which shall be filed with the Commission in Washington at least 10 days prior to the date of the proposed operation: *Provided*, That, an application filed within less than 10 days of the proposed operation may be accepted upon a satisfactory showing of the reasons for the delay in submitting the request.

(c) An informal request for special temporary authority shall be addressed to the FCC in Washington, DC, and must include full particulars including: applicant's name, statement of eligibility, call letters of associated broadcast station or stations, if any, name and address of individual designated to receive return telegram, type and manufacturer of equipment, power output, emission, frequency or frequencies proposed to be used, commencement and termination date, location of proposed operation, and purpose for which request is made including any particular justification.

(d) A request for special temporary authority shall specify a frequency band consistent with the provisions of § 74.802: *Provided*, That, in the case of events of wide-spread interest and importance which cannot be transmitted successfully on these frequencies, frequencies assigned to other services may be requested upon a showing that operation thereon will not cause interference to established stations: *And provided further*, In no case will operation of a low power auxiliary broadcast station be authorized on frequencies employed for the safety of life and property.

(e) The user shall have full control over the transmitting equipment during the period it is operated.

(f) Special temporary authority to permit operation of low power auxiliary stations pending Commission action on an application for regular authority will not normally be granted.

[42 FR 14729, Mar. 16, 1977, as amended at 47 FR 9221, Mar. 4, 1982; 47 FR 55939, Dec. 14, 1982]

§ 74.851 Type acceptance of equipment.

(a) Applications for new low power auxiliary stations will not be accepted unless the transmitting equipment specified therein has been type accepted for use pursuant to provisions of this subpart.

(b) Any manufacturer of a transmitter to be used in this service may apply for type acceptance for such transmitter following the type acceptance procedure set forth in part 2 of the Commission's Rules and Regulations. Attention is also directed to part 1 of the Commission's Rules and Regulations which specifies the fees required when filing an application for type acceptance.

(c) An applicant for a low power auxiliary station may also apply for type acceptance for an individual transmitter by following the type acceptance procedure set forth in part 2 of the Commission's Rules and Regulations. The application for type acceptance must be accompanied by the proper fees as prescribed in part 1 of the Commission's Rules and Regulations. Individual transmitters which are type accepted will not normally be included in the Commission's "Radio Equipment List."

(d) Low power auxiliary station equipment authorized to be used pursuant to an application accepted for filing prior to December 1, 1977 may continue to be used by the licensee or its successors or assignees: *Provided, however*, If operation of such equipment causes harmful interference due to its failure to comply with the technical standards set forth in this subpart, the Commission may, at its discretion, require the licensee to take such corrective action as is necessary to eliminate the interference.

(e) Each instrument of authority which permits operation of a low power auxiliary station using equipment which has not been type accepted will specify the particular transmitting equipment which the licensee is authorized to use.

(f) All transmitters marketed for use under this subpart shall be type accepted by the Federal Communications Commission for this purpose. (Refer to subpart I of part 2 of the Commission's rules and regulations.)

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[42 FR 14729, Mar. 16, 1977, as amended at 42 FR 43637, Aug. 22, 1977; 43 FR 13576, Mar. 31, 1978]

§ 74.852 Equipment changes.

(a) The licensee of a low power auxiliary station may make any changes in the equipment that are deemed desirable or necessary, including replacement with type accepted equipment, without prior Commission approval: *Provided*, The proposed changes will not depart from any of the terms of the station authorization or the Commission's technical rules governing this service: *And provided further*, That any changes made to type accepted transmitted equipment shall be in compliance with the provisions of part 2 of the Commission's rules and regulations concerning modification of type accepted equipment.

(b) Any equipment changes made pursuant to paragraph (a) of this section shall be set forth in the next application for renewal of license.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[42 FR 14729, Mar. 16, 1977, as amended at 43 FR 13576, Mar. 31, 1978]

§ 74.861 Technical requirements.

(a) Transmitter power is the power at the transmitter output terminals and delivered to the antenna, antenna transmission line, or any other impedance-matched, radio frequency load. For the purpose of this subpart, the transmitter power is the carrier power.

(b) Each authorization for a new low power auxiliary station shall require the use of type accepted equipment. Such equipment shall be operated in accordance with the emission specifications included in the type acceptance grant and as prescribed in paragraphs (c) through (e) of this section.

(c) Low power auxiliary transmitters not required to operate on specific carrier frequencies shall operate sufficiently within the authorized frequency band edges to insure the emission bandwidth falls entirely within the authorized band.

(d) For low power auxiliary stations operating in the bands other than those allocated for TV broadcasting, the following technical requirements are imposed.

(1) The maximum transmitter power which will be authorized is 1 watt. Licensees may accept the manufacturer's power rating; however, it is the licensee's responsibility to observe specified power limits.

(2) If a low power auxiliary station employs amplitude modulation, modulation shall not exceed 100 percent on positive or negative peaks.

(3) The occupied bandwidth shall not be greater than that necessary for satisfactory transmission and, in any event, an emission appearing on any discrete frequency outside the authorized band shall be attenuated, at least, $43+10 \log_{10}$ (mean output power, in watts) dB below the mean output power of the transmitting unit.

(e) For low power auxiliary stations operating in the bands allocated for TV broadcasting, the following technical requirements apply:

(1) The power of the measured unmodulated carrier power at the output of the transmitter power amplifier (antenna input power) may not exceed the following:

(i) 54-72, 76-88, and 174-216 MHz bands—50 mW

(ii) 470-608 and 614-806 MHz bands—250 mW

(2) Transmitters may be either crystal controlled or frequency synthesized.

(3) Any form of modulation may be used. A maximum deviation of ±75 kHz is permitted when frequency modulation is employed.

(4) The frequency tolerance of the transmitter shall be 0.005 percent.

(5) The operating bandwidth shall not exceed 200 kHz.

(6) The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

(i) On any frequency removed from
e operating frequency by more than
percent up to and including 100 per-
nt of the authorized bandwidth: at
ast 25 dB;

(ii) On any frequency removed from
e operating frequency by more than
0 percent up to and including 250
ercent of the authorized bandwidth:
least 35 dB;

(iii) On any frequency removed from
e operating frequency by more than
0 percent of the authorized band-
dth: at least $43+10\log_{10}$ (mean
tput power in watts) dB.

(f) Unusual transmitting antennas or
tenna elevations shall not be used to
liberately extend the range of low
wer auxiliary stations beyond the
ited areas defined in § 74.831.

g) Low power auxiliary stations
all be operated so that no harmful
terference is caused to any other
ss of station operating in accord-
ce with Commission's rules and reg-
ations and with the Table of Fre-
ency Allocations in part 2 thereof.

h) In the event a station's emissions
tside its authorized frequency band
uses harmful interference, the Com-
ssion may, at its discretion, require
e licensee to take such further steps
may be necessary to eliminate the
erference.

c. 5, 48 Stat. 1068; 47 U.S.C. 155)

FR 13576, Mar. 31, 1978, as amended at
R 2535, Jan. 23, 1987]

.882 Station identification.

Call signs will not be assigned to low
wer auxiliary stations. In lieu there-
for transmitters used for voice
nsmissions and having a transmit-
output power exceeding 50 mW, an
nouncement shall be made at the
ginning and end of each period of
ration at a single location, over the
nsmitting unit being operated, iden-
ying the transmitting unit designa-
its location, and the call sign of
broadcasting station or name of
licensee with which it is being
d. A period of operation may con-
of a continuous transmission or
ermittent transmissions pertaining
single event.

FR 14729, Mar. 16, 1977]

Subpart I—Instructional Television Fixed Service

SOURCE: 28 FR 13731, Dec. 14, 1963, unless otherwise noted.

§ 74.901 Definitions.

Attended operation. Operation of a station by a qualified operator on duty at the place where the transmitting apparatus is located with the transmitter in plain view of the operator.

Instructional television fixed station. A fixed station operated by an educational organization and used primarily for the transmission of visual and aural instructional, cultural, and other types of educational material to one or more fixed receiving locations.

ITFS response station. A fixed station operated at an authorized location to provide communication by voice and/or data signals to an associated instructional television fixed station.

Main channel: The main channel is that portion of each authorized channel used for the transmission of visual and aural information as set forth in § 73.682 of this Chapter and § 74.938 of this subpart.

Remote control. Operation of a station by a qualified operator on duty at a control position from which the transmitter is not visible but which control position is equipped with suitable control and telemetering circuits so that the essential functions that could be performed at the transmitter can also be performed from the control point.

Subsidiary channel: A subsidiary channel is any portion of an authorized channel not used for main channel transmissions.

Temporary fixed ITFS station. An ITFS station used for the transmission of material from temporary unspecified points to an ITFS station.

Unattended operation. Operation of a station by automatic means whereby the transmitter is turned on and off and performs its functions without attention by a qualified operator.

[28 FR 13731, Dec. 14, 1963, as amended at 35 FR 4705, Mar. 18, 1970; 48 FR 33901, July 26, 1983; 49 FR 32596, Aug. 15, 1984]

§ 74.902 Frequency assignments.

(a) The following frequencies may be assigned to instructional television fixed stations:

Channel No.	Band limits MHz
GROUP A	
A-1	2500-2506
A-2	2512-2518
A-3	2524-2530
A-4	2536-2542
GROUP B	
B-1	2506-2512
B-2	2518-2524
B-3	2530-2536
B-4	2542-2548
GROUP C	
C-1	2548-2554
C-2	2560-2566
C-3	2572-2578
C-4	2584-2590
GROUP D	
D-1	2554-2560
D-2	2566-2572
D-3	2578-2584
D-4	2590-2596
GROUP E	
E-1	2596-2602
E-2	2608-2614
E-3	2620-2626
E-4	2632-2638
GROUP F	
F-1	2602-2608
F-2	2614-2620
F-3	2626-2632
F-4	2638-2644
GROUP G	
G-1	2644-2650
G-2	2656-2662
G-3	2668-2674
G-4	2680-2686

(b) Instructional Television Fixed Stations authorized to operate on Channels 2650-2656, 2662-2668, and 2674-2680 MHz as of July 16, 1971, may continue to operate on a coequal basis with other stations operating in accordance with the Table of Frequency Allocations. Requests for subsequent renewals or modification of existing licenses will be considered; however, expansion of systems comprised of such stations will not be permitted except on frequencies allocated for the service.

(c) Channels 2596-2602, 2602-2608, 2608-2614, 2614-2620, 2620-2626, 2626-2632, 2632-2638, and 2638-2644 MHz and the corresponding response channels listed in § 74.939(d) are shared with the Multipoint Distribution Service. No new Instructional Television Fixed Service applications for these channels filed after May 25, 1983 will be accepted. In those areas where Multipoint Distribution Service use of these channels is allowed pursuant to § 21.902, Instructional Television Fixed Service users of these channels will continue to be afforded protection from harmful cochannel and adjacent channel interference from Multipoint Distribution Service stations.

(d) A licensee is limited to the assignment of no more than four channels for use in a single area of operation, all of which should be selected from the same Group listed in paragraph (a) of this section. An area of operation is defined as the area in which the use of channels by one licensee precludes their use by other licensees. Applicants shall not apply for more channels than they intend to construct within a reasonable time, simply for the purpose of reserving additional channels. The number of channels authorized to an applicant will be based on the demonstration of need for the number of channels requested. The Commission will take into consideration such factors as the amount of use of any currently assigned channels and the amount of proposed use of each channel requested, the amount of, and justification for, any repetition in the schedules, and the overall demand and availability of ITFS channels in the community. For those applicant organizations formed for the purpose of serving accredited institutional or governmental organizations, evaluation of the need will only consider service to those specified receive sites which submitted supporting documentation pursuant to § 74.932(a)(4).

(e) The same channel may be assigned to more than one station or more than one licensee in the same area if the geometric arrangement of the transmitting and receiving points

r the times of operation are such that
nterference is not likely to occur.

(f) A temporary fixed ITFS station
ay use any available ITFS channel
n a secondary basis. Operation of sta-
ions located within 35 miles of
anada shall be limited by
74.24(h)(3) of this subpart.

(g) Where adjacent channel oper-
tion is proposed in any area, the pre-
erred location of the proposed sta-
ion's transmitting antenna is at the
ite of the adjacent channel transmit-
ing antenna. If this is not practicable,
he adjacent channel transmitting an-
ennas should be located as close as
easonably possible.

9 FR 7023, May 28, 1964, as amended at 31
R 10743, Aug. 12, 1966; 36 FR 11587, June
, 1971; 48 FR 33901, July 26, 1983; 49 FR
596, Aug. 15, 1984; 50 FR 26758, June 28,
985]

74.903 Interference.

(a) Since interference in this service
ill occur only when an unfavorable
esired-to-undesired signal ratio exists
t the antenna input terminals of the
ffected receiver, the directive proper-
es of receiving antennas can be used
o minimize the hazard of such inter-
erence. Interference may also be con-
rolled through the use of directive
ansmitting antennas, geometric ar-
angement of transmitters and receiv-
s, and the use of the minimum
ower required to provide the needed
ervice. Harmful interference will be
onsidered present when the reference
eceiving antenna is oriented to re-
eive the maximum desired signal, and
free space calculation determines
hat the desired-to-undesired signal
atio is less than the value specified
r the respective channel under con-
deration.

(1) Cochannel interference is defined
s the ratio of the desired signal to the
ndesired signal, at the antenna input
erminals of the affected receiver,
hen the ratio is less than 45 dB.

(2) Adjacent channel interference is
efined as the ratio of the desired
gnal to undesired signal present in
n adjacent channel, at the antenna
nput terminals of the affected receiv-
r, when the ratio is less than 0 dB,
xcept in cases where the stations
ere constructed before May 26, 1983. In such cases, the desired to undesired signal ratio shall not be less than 10 dB unless the individual receive site under consideration has been subsequently upgraded with up-to-date reception equipment. Absent information presented to the contrary, the Commission will assume that reception equipment installation occurred simultaneously with original station construction.

(3) For purposes of this section, all interference calculations involving receive antenna performance shall use the reference antenna characteristics shown in Figure 1, of § 74.937(a) or, in the alternative, utilize the actual pattern characteristics of the antenna in use at the receive site under study. If the actual receive antenna pattern is utilized, the applicant must submit complete details including manufacturer, model number(s), co-polar and cross-polar gain patterns, and other pertinent data.

(4) If an application can demonstrate that the installation of a receiving antenna at an existing licensee's site with characteristics superior to those of the standard antenna (or, alternatively, the appropriate existing antenna in use at the site) will permit the applicant to provide service without interference to the existing licensee, the application will be considered grantable with the condition that the applicant bears all costs of upgrading the existing licensee's reception equipment at that site(s). Such a showing should include interference calculations for both the existing or reference antenna and the proposed antenna. The manufacturer, model number(s), co-polar and cross-polar gain patterns of the replacement antenna should be supplied as well as an accurate assessment of the expected reimbursement costs.

(b) All applicants for instructional television fixed stations are expected to take full advantage of such directive antenna techniques to prevent interference to the reception of any existing operational fixed, multichannel multipoint distribution, international control or instructional television fixed station at authorized receiving locations. Therefore, all applications for new or major changes must include an analysis of potential interference to all existing and previously proposed stations in accordance with § 74.903(a). An applicant for a new instructional television fixed station or for changes in an existing ITFS facility for a construction permit must include the following technical information with the application:

(1) An analysis of the potential for harmful cochannel interference with any authorized or previously proposed station if:

(i) The proposed transmitting antenna has an unobstructed electrical path to receive sites(s) of any other station(s) that utilize(s), or would utilize, the same frequency, or

(ii) The proposed transmitter is within 50 miles of the coordinates of any such station.

(2) An analysis of the potential for harmful adjacent channel interference with any authorized or previously proposed station(s) if the proposed transmitter is within 50 miles of the coordinates of any other station(s) that utilize(s), or would utilize, an adjacent channel frequency.

(3) An analysis concerning possible adverse impact upon Mexican and Canadian communications if the station's transmitting antenna is to be located within 50 miles of the border.

(4) In lieu of the interference analyses required by paragraphs (b)(1) and (b)(2) of this Section for any authorized or previously proposed station(s), an applicant may submit a statement(s) from the affected ITFS licensee(s) or permittee(s) that any resulting interference is acceptable.

(c) Existing licensees and prospective applicants are expected to cooperate fully in attempting to resolve problems of potential interference before bringing the matter to the attention of the Commission.

[28 FR 13731, Dec. 14, 1963, as amended at 50 FR 26758, June 28, 1985; 51 FR 9799, Mar. 21, 1986]

§ 74.910 Part 73 application requirements pertaining to ITFS stations.

The following rules are applicable to ITFS stations.

Sec.	
73.3500	Application and report forms.
73.3511	Applications required.
73.3512	Where to file; number of copies.
73.3513	Signing in applications.
73.3514	Content of applications.
73.3517	Contingent applications.
73.3519	Repetitious applications.
73.3533	Application for construction permit or modification of construction permit.
73.3534	Application for extension of construction permit or for construction permit to replace expired construction permit.
73.3536	Application for license to cover construction permit.
73.3542	Application for temporary or emergency authorization.
73.3561	Staff consideration of applications requiring Commission action.
73.3562	Staff consideration of applications not requiring action by the Commission.
73.3564 (a), (b)	Acceptance of applications.
73.3566	Defective applications.
73.3568	Dismissal of applications.
73.3587	Procedure for filing objections.
73.3598	Period of construction.
73.3599	Forfeiture of construction permit.

The applicability of other rules in part 73, where appropriate, is not precluded by this section.

[50 FR 26759, June 28, 1985]

§ 74.911 Processing of ITFS station applications.

(a) Application for ITFS stations are divided into two groups:

(1) In the first group are applications for new stations or major changes in the facilities of authorized stations. These applications are subject to the provisions of paragraph (c) of this section. A major change for an ITFS station will be any proposal to add new channels, change from one channel (or channel group) to another, or increase power. However, the Commission may, within 15 days after the acceptance of an application, or 15 days after the acceptance of any other application for modification of facilities, advise the applicant that such application is considered to be one for a major change, and subject to the provisions of paragraph (c) of this section.

(2) The second group consists of applications for licenses and all other changes in the facilities of authorized stations.

(b) A new file number will be assigned to an application for a new station or for major changes in the facilities of an authorized station, when it is amended so as to effect a major change, as defined in paragraph (a)(1) of this Section, or result in a situation where the original party or parties to the application do not retain control of the applicant as originally filed. An application for change in the facilities of any existing station will continue to carry the same file number even though (pursuant to Commission approval) an assignment of license or transfer of control of such licensee or permittee has taken place if, upon consummation, the application is amended to reflect the new ownership.

(c) Applications for ITFS stations will be processed as nearly as possible in the order in which they are filed. In order that those applications which are mutually exclusive may be grouped and fixed for processing, the Commission will periodically release a public notice listing applications for new facilities or major modifications which have been accepted for filing and announcing a date 60 days after its release on which the listed applications will be considered available and ready for processing and by which all mutually exclusive applications, petitions to deny the listed applications, and major amendments to the listed applications must be filed. A second Public Notice be released, listing applications filed in response to the initial Public Notice, providing 30 days after its release to file petitions to deny against the listed applications or to make minor amendments.

(d) Those applications, other than mutually exclusive applications, which upon examination meet other pertinent requirements and would serve the public interest, convenience and necessity will be granted. Mutually exclusive applications will be processed pursuant to the provisions in § 74.913.

[50 FR 26759, June 28, 1985]

§ 74.912 Petitions to deny.

(a) Any party in interest may file with the Commission a petition to deny any application for new facilities or major changes in the facilities of authorized stations, provided such petitions are filed by the date established pursuant to the cut-off provisions of § 74.911(c). In the case of all other applications, except those excluded under section 309(c) of the Communications Act of 1934, as amended, petitions to deny must be filed not later than 30 days after issuance of a public notice of the acceptance for filing of the applications. In the case of applications for renewal of license, petitions to deny may be filed after the issuance of a public notice of acceptance for filing of the applications and up until the first day of the last full calendar month of the expiring license term.

(b) The applicant file an opposition to any petition to deny, and the petitioner a reply to such opposition in which allegations of fact or denials thereof shall be supported by affidavit of a person or persons with personal knowledge thereof. The times for filing such oppositions and replies shall be those provided in § 1.45 of this chapter.

(c) Only petitions to deny filed against a tentative selectee (§ 74.913) will be considered. If the petition does not present substantial and material questions of fact warranting a hearing, the petition will be denied and the tentative selectee will be granted a license where, upon examination, the Mass Media Bureau finds that other pertinent requirements have been met and the public interest, convenience and necessity would be served. Where necessary, the points of the application will be modified to comport with any findings made as a result of the review. In the event that the tentative selectee's application is denied or its point total reduced, the point system process will be repeated, where necessary, to determine the tentative selectee or applicants qualifying for the random tie-breaker. If, upon examination, a substantial and material question of fact is found and the Bureau is unable to find that the public interest, convenience and necessity will be served by granting the application of the tentative selectee pursuant to the point system, its application will be designated for hearing pursuant to section 309 of the Communications Act of 1934, as amended. Petitions for reconsideration, motions to stay, or applications for review may be submitted at the time the Bureau grants or denies the application of the tentative selectee pursuant to the filing periods specified in § 1.45 of this chapter.

[50 FR 26759, June 28, 1985]

§ 74.913 Selection procedure for mutually exclusive ITFS applications.

(a) If timely filed ITFS applications are determined to be mutually exclusive, such applications will be processed and assessed points to determine the tentative selectee for the particular channels. The tentative selectee will be the applicant with the highest point total under the procedure set forth in this section, unless the provisions of paragraph (c) of this section apply, and will be awarded the requested channels if the Commission concludes that such an award will serve the public interest, convenience and necessity.

(b) Each application will be awarded a predetermined number of points under the criteria listed:

(1) Four points for applicants that are "local," as defined in § 74.932, n.1.

(2) Three points for accredited schools, or their governing bodies applying within their jurisdiction;

(3) Two points for applicants whose request, if granted, would result in the acquisition of four or fewer ITFS channels by that applicant within the particular area;

(4) One point for a proposed weekly schedule of twenty-one or more average hours per channel per week of formal educational programming (§ 74.931(a)), or of forty-one or more average hours per channel per week of other ITFS programming; two points for forty-one or more average hours per channel per week of formal education programming, or for sixty-one or more hours per channel per week of ITFS programming where at least twenty-one of those hours are formal educational programming;

(5) One point for an existing E or F channel licensee seeking to relocate and showing an established need for an expanded service that cannot be accommodated on its grandfathered E or F facilities. The applicant must submit a specific request and adequate supporting documentation.

(c) If the best qualified (highest scoring) two or more applicants have the same point accumulation, they will be given thirty days from the date of release of such decision to notify the Commission of any agreement to divide the use of the channels. If no agreement is reached and advanced to the Commission within that time, the tentative selectee will then be determined through a tie-breaker mechanism.

(d) The tie-breaker will operate as follows: each of the tied applicants will be directed to submit to the Commission a statement of the number of students at its proposed receive locations who are formally enrolled in classes for credit toward an academic degree or diploma, or a legally required certification or license. It must also demonstrate that this claim of students who would benefit from the proposed system is supported by the educational programs proposed in its application. Each applicant will serve it submission(s) on the other tied competing applicant(s), who will have an opportunity to respond to any aspect of the enrollment submissions. If any applicant's system would reach less than 80% as many students as another applicant's would reach, the application which would result in service to the fewer number of students will be denied. The application(s) of any remaining applicant(s) will be granted. If more than one application is to be granted under this procedure, the channels or channel capacity will be divided evenly among the remaining applicants. At any time during this process, the applicants may advise the Commission that they are negotiating or have reached settlement for disposition of the contested facilities, and the Commission will withhold further comparative processing upon such notification.

(1) Enrollment will be considered as of the last date for filing petitions to deny against listed applications or to make minor amendments, as provided by § 74.911(c) of this part. Enrollment figures should be the latest available from a regular term or session prior to that filing date, and must be taken

from a statement or submission of data made by the subject school for some other official purpose or function, such as a mid-year or year-end fiscal report, or a budget proposal, and they must represent actual, not projected, student population. Each applicant must identify the source(s) from which its submitted enrollment figures are drawn.

(2) All full- and part-time students formally enrolled in classes for credit toward an academic degree or diploma, or a legally required certification or license, at any school, campus, or other locations listed in the application as a receive site may be counted, except if an applicant's system would serve only students in a particular discipline (or disciplines) or at a particular grade level (or levels), only students in classes and programs within that discipline(s) or grade level(s) may be counted.

(3) For off-campus sites, only students who can be shown to be recipients of formal ITFS educational material may be counted.

(4) Applicants serving students other than their own count only students at schools, campuses, and other receive sites which have submitted a letter indicating their intention to use the proposed service. The validity of such expressions of intention will be judged pursuant to § 74.932 of these rules. If several schools from the same school system are listed as receive sites, a single letter from an appropriate person representing the school board or system will be sufficient to demonstrate the intention to use the proposed service at each of these receive sites if each receive site's participation is specifically acknowledged.

Note 1: Entities entitled to the accreditation points will include umbrella organizations whose membership is composed of entities which are individually eligible for the points. Also, a state's department of education (or equivalent agency) would qualify, as well as any directly controlled arm of that department if its specific duties include that department's educational function.

Note 2: Average hours per channel per week are determined by totaling the number of scheduled hours per week of programming between 8:00 a.m and 10:00 p.m. Monday through Saturday in the subject category, and dividing that total by the number of channels.

Note 3: Paragraph (b)(3) of this section does not apply to applications for modification of facilities other than the addition of channels.

Note 4: For applications pending as of August 14, 1989, the enrollment which will be counted will be the most recent available up to August 22, 1989, for which receive sites are on file by that date.

[50 FR 26759, June 28, 1985, as amended at 51 FR 9800, Mar. 21, 1986; 51 FR 39536, Oct. 29, 1986; 54 FR 29039, July 11, 1989; 55 FR 6801, Feb 27, 1990]

§ 74.931 Purpose and permissible service.

(a) Instructional television fixed stations are intended primarily to provide a formal educational and cultural development, in aural and visual form, to students enrolled in accredited public and private schools, colleges and universities. Every channel authorized must be used to transmit formal educational programming offered for credit to enrolled students of accredited schools.

(1) All applicants that do not list accredited schools as receive sites must name the school(s) and the degree(s) or diploma(s) for which the formal programming will be offered and describe the administration of the course(s). They must submit documentation, written or signed by the authorities responsible for the schools' curricula, verifying each of these points.

(b) Such stations may also be used for the additional purpose of transmitting other visual and aural educational, instructional and cultural material to selected receiving locations, including in-service training and instruction in special skills and safety programs, extension of professional training, informing persons and groups engaged in professional and technical activities of current developments in their particular fields, and other similar endeavors.

(c) During periods when the circuits provided by these stations are not being used for the transmission of instructional and cultural material, they may be used for the transmission of material directly related to the administrative activities of the licensee such as the holding of conferences with personnel, distribution of reports and assignments, exchange of data and statistics, and other similar uses. Stations will not be licensed in this service solely for the transmission of administrative traffic.

(d) Stations may be licensed in this service as originating or relay stations to interconnect instructional television fixed stations in adjacent areas, to deliver instructional and cultural material to, and obtain such material from, commercial and noncommercial educational television broadcast stations for use on the instructional television fixed system, and to deliver instructional and cultural material to, and obtain such material from, nearby terminals or connection points of closed circuit educational television systems employing wired distribution systems or radio facilities authorized under other parts of this chapter, or to deliver instructional and cultural material to any CATV system serving a receiving site or sites which would be eligible for direct reception of ITFS signals under the provisions of paragraphs (a) and (b) of this section.

(e) A licensee may use excess capacity on each channel to transmit material other than the ITFS subject matter specified in paragraphs (a), (b), (c) and (d) of this section, provided it preserves at least 40 hours der week, including at least 6 hours$per weekday (Monday through Friday), excluding holidays and vacation days, for ITFS purposes on that channel; and at least 20 hours per week of the preserved time on each channel must be used for ITFS programming, including at least 3 hours per weekday, excluding holidays and vacation days. This preservation may consist of airtime strictly reserved for ITFS use and not used for non-ITFS programming, or, of time used for non-ITFS programming but subject to ready recapture by the licensee for ITFS use with no economic or operational detriment to the licensee. Only ITFS programming and preserved airtime scheduled between 8:00 a.m. and 10:00 p.m., Monday through Saturday, will qualify to meet this requirement. All of the capacity available on any subsidiary channel of any authorized channel may be used for the transmission of material to be used by others. When an ITFS licensee makes capacity available on a common carrier basis, it will be subject to common carrier regulation. A licensee operating as a common carrier is required to apply for the appropriate authorization and to comply with all policies and rules applicable to that service. Responsibility for making the initial determination of whether a particular activity is a common carriage rests with the ITFS licensee. Initial determinations by the licensees are subject to Commission examination and may be reviewed at the Commission's discretion. Leasing activity may not cause unacceptable interference to cochannel and adjacent channel operations.

NOTE 1: Any medical service courses offered by hospitals to their staffs or to medical students as training for state or national licenses or certifications will qualify as formal educational programming to satisfy the requirement of paragraph (a) of this section.

(f) Material transmitted by these stations may be intended for simultaneous reception and display or may be recorded by authorized users for use at another time.

(g) On a secondary basis, an ITFS station may be operated as a temporary fixed station from temporary unspecified points to an ITFS station under the provisions of paragraph (a), (b), (d) or (e) of this section.

[28 FR 13731, Dec. 14, 1963, as amended at 33 FR 15424, Oct. 17, 1968; 48 FR 33901, July 26, 1983; 49 FR 27151, July 2, 1984; 49 FR 32596, Aug. 15, 1984; 50 FR 26760, June 28, 1985; 51 FR 9800, Mar. 21, 1986]

§ 74.932 Eligibility and licensing requirements.

(a) A license for an instructional television fixed station will be issued only to an accredited institution or to a governmental organization engaged in the formal education of enrolled students or to a nonprofit organization whose purposes are educational and include providing educational and instructional television material to such accredited institutions and governmental organizations, and which is otherwise qualified under the statutory provisions of the Communications Act of 1934, as amended.

(1) Only local applicants can file applications and be considered for licenses during the local priority period, which extends for one year from the effective date of these rules.

(i) During this local priority period, the existing of any outstanding application for ITFS channels by a nonlocal applicant will not prevent the filing and/or grant of an application by a local entity for those same channels.

(2) A publicly supported educational institution must be accredited by the appropriate state department of education.

(3) A privately controlled educational institution must be accredited by the appropriate state department of education or the recognized regional and national accrediting organizations.

(4) Those applicant organizations whose eligibility is established by service to accredited institutional or governmental organizations must submit documentation from proposed receive sites demonstrating they will receive and use the applicant's formal educational programming. In place of this documentation, a state educational television (ETV) commission may demonstrate that the public schools it proposes to serve are required to use its proposed formal educational programming.

(5) Nonlocal applicants, in addition to submitting letters from proposed receive sites, must demonstrate the establishment of a local program committee in each community where they apply.

(b) No numerical limit is placed on the number of stations which may be licensed to a single licensee. However, individual licensees will be governed by the limitation of § 74.902 as to the number of channels which may be used. A single license may be issued for more than one transmitter if they are to be located at a common site and operated by the same licensee. Applicants are expected to accomplish the proposed operation by the use of the smallest number of channels required to provide the needed service.

(c) An application for a new instructional television fixed station or for changes in the facilities of an existing station shall specify the location of the transmitter, all proposed receiving installations, response transmitters, and any relay transmitters which will be under the control of or will be equipped for reception by the applicant. If reception is also intended at unspecified locations, i.e., if power is deliberately radiated to locations or areas so that voluntary reception will be possible, the applications shall include a complete statement as to the purpose of such additional reception.

(d) In case of permanent discontinuance of operation of a station licensed under this subpart, authority to operate is forfeited and the licensee shall forward the station license to the Commission for cancellation. For the purposes of this section, a station which is not operated for a period of one year is considered to have been permanently discontinued. If use of a channel(s) is discontinued, authority to operate on such channel(s) is forfeited and an application for modification shall be filed to delete such channel(s).

NOTE 1: A "local" licensee (or applicant) is an institution or organization that is physically located in the community, or metropolitan area, where service is proposed. For a college or university, this would include any area where it has a campus. An educational organization will generally be regarded as "local" if the address of the organization's headquarters is located within the area where the facility is sought. An entity created by a state or local government for the purpose of serving formal educational needs will be considered "local" throughout the area within the government's jurisdiction over which its authority is intended to extend. An educational entity located within a state and created by affiliated educational institutions within that state, including hospitals, will be considered "local" in those areas where the member institutions are located.

NOTE 2: Documentation from proposed receive sites which are to establish the eligibility of an entity not serving its own enrolled students for credit should be in letter form, written and signed by an administrator or authority who is responsible for the receive site's curriculum planning. The administrator must indicate that the applicant's program offerings have been viewed and that such programming will be incorporated in the site's curriculum. The letter should discuss the types of programming and hours per week of formal and informal programming expected to be used and the site's involvement in the planning, scheduling and production of programming. If other levels of authority must be obtained before a firm commitment to utilize the service can be made, the nature and extent of such additional authorization(s) must be provided.

NOTE 3: Letters submitted on behalf of a nonlocal entity must confirm that a member of the receive site's staff will serve on the local program committee and demonstrate a recognition of the composition and power of the committee. The letter should show that the staff member will aid in the selection, scheduling and production of the programming received over the system.

[28 FR 13731, Dec. 14, 1963, as amended at 36 FR 8873, May 14, 1971; 49 FR 32596, Aug. 15, 1984; 50 FR 26760, June 28, 1985; 51 FR 9800, Mar. 21, 1986]

§ 74.933 Remote control operation.

Licensed ITFS stations may be operated by remote control without further authority.

[52 FR 3806, Feb. 6, 1987]

§ 74.934 Unattended operation.

Unattended operation of licensed ITFS stations is permitted without further authority.

(a) An unattended relay station may be employed to receive and retransmit signals of another station provided that the transmitter is equipped with circuits which permit it to radiate only when the signal intended to be retransmitted is present at the receiver input terminals.

[52 FR 3806, Feb. 6, 1987]

§ 74.935 Power limitations.

(a) The power of an instructional television fixed station will be limited to that required to perform the proposed service. Applicants are expected to take full advantage of the power-concentrating properties of directive transmitting antennas and the collective properties of directive receiving antennas to provide the needed service.

(b) An application for a new instructional television fixed station or for changes in the facilities of an existing station proposing a peak visual power output from the transmitter in excess of 10 watts shall include a showing as to the distance and direction to each specified receiving point, the elevation above ground and the power gain of each receiving antenna at such receiving points, the vertical and horizontal directive patterns of the proposed transmitting antenna system in terms of power gain, the elevation of the transmitting antenna above ground and the nature of significant terrain features over the transmission path or paths.

(c) The operating power (peak visual) of an instructional television fixed station shall not be permitted to exceed the authorized power by more than 10 percent at any time.

(d) The transmitter power output of the aural signal shall not be more than 70 percent nor less than 10 percent of the peak power output of the visual signal.

§ 74.936 Emissions and bandwidth.

(a) An instrutional television fixed station shall normally employ amplitude modulation (A5) for the transmission of the visual signal and frequency modulation (F3) for the transmission of the aural signal.

(b) The average power of radio frequency harmonics of the visual and aural carriers, measured at the output terminals of the transmitter, shall be attenuated no less than 60 dB below the peak visual output power within the assigned channel. All other emissions appearing on frequencies more than 3 MHz above or below the upper and lower edges, respectively, of the assigned channel shall be attenuated no less than:

(1) 30 dB for transmitters rated at less than 10 watts visual peak power output.

(2) 40 dB for transmitters rated at 10 watts or more visual peak power output.

(c) Should interference occur as the result of emissions outside the assigned channel, greater attenuation may be required.

§ 74.937 Antennas.

(a) In order to minimize the hazard of harmful interference from other stations, directive receiving antennas should be used at all receiving locations. The choice of receiving antennas is left to the discretion of the licensee. However, for the purpose of interference calculations, the general characteristics of the reference receiving antenna shown in Figure 1 of this section (*i.e.*, a 2-foot parabolic reflector antenna) are assumed to be used in accordance with the provisions of § 74.903(a)(3) unless pertinent data is submitted of the actual antenna in use at the receive site. Licensees may install receiving antennas with general characteristics superior to those of the reference receive antenna. Nevertheless, should interference occur and it can be demonstrated by an applicant that the existing antenna at the receive site is inappropriate, a more suitable yet practical receiving antenna should be installed. In such cases, the modification of the receive site will be in the discretion, and will be the responsibility, of the licensee serving the site.

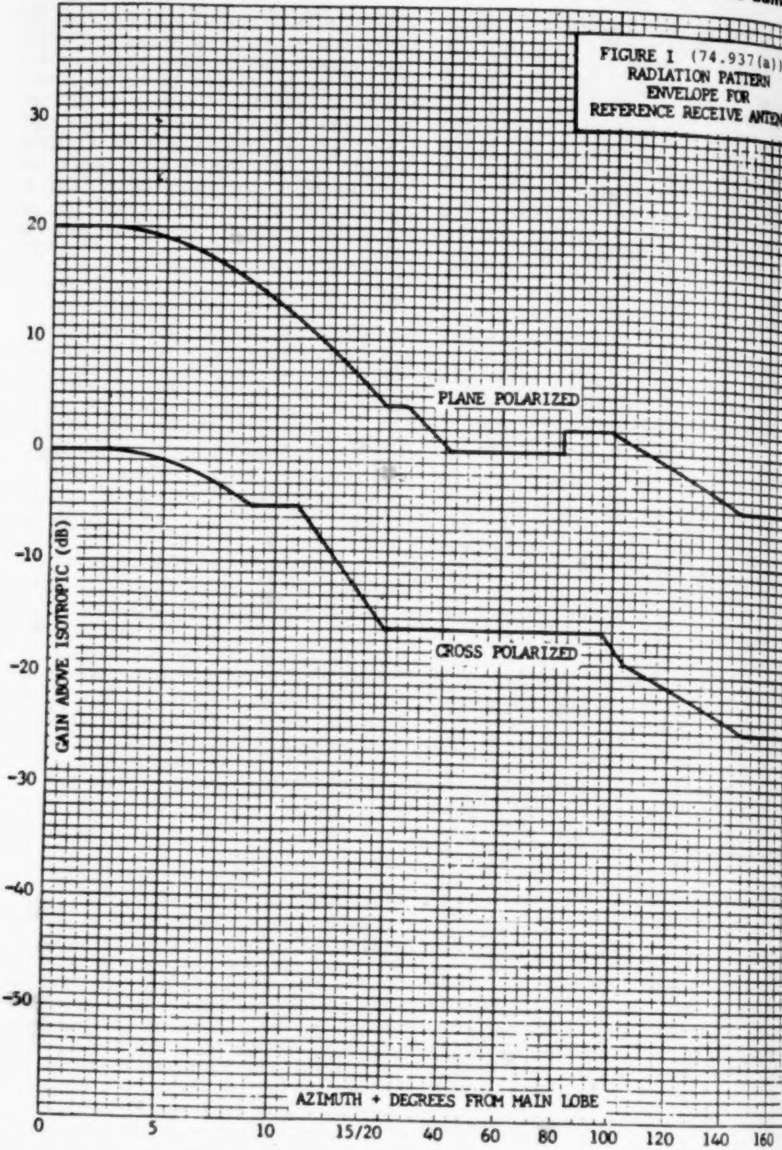
FIGURE I (74.937(a))
RADIATION PATTERN
ENVELOPE FOR
REFERENCE RECEIVE ANTEN
PLANE POLARIZED
CROSS POLARIZED
GAIN ABOVE ISOTROPIC (dB)
30
20
10
0
-10
-20
-30
-40
-50
AZIMUTH + DEGREES FROM MAIN LOBE
0
5
10
15/20
40
60
80
100
120
140
160

(b) Directive transmitting antennas shall be used whenever feasible so as to minimize interference to other licensees. The radiation pattern shall be designed to minimize radiation in directions where no reception is intended. When an ITFS station is used for point-to-point service, an appropriate directional antenna must be used.

(c) The use of elevated receiving antennas is preferable to the use of elevated transmitting antennas or greater power to provide the desired service.

(d) The use of vertical or horizontal plane polarization or right-hand or left-hand rotating (circular) polarization may be used to minimize the hazard of harmful interference between systems. The Commission reserves the right to specify the polarization to be used.

(e) The power gain compared to an isotropic antenna and the directive properties of the transmitting and receiving antennas proposed to be employed, as well as the geometric distribution of the transmitting and receiving points, shall be supplied with each application for a new ITFS fixed station or for changes in the antenna facilities of an existing station.

[28 FR 13731, Dec. 14, 1963, as amended at 48 FR 9012, Mar. 3, 1983; 49 FR 32596, Aug. 15, 1984; 50 FR 26761, June 28, 1985; 52 FR 3806, Feb. 6, 1987]

§ 74.938 Transmission standards.

(a) The width of an ITFS channel is 6 MHz. ITFS transmitters must be type accepted by the Commission for the particular visual and aural signals that will be employed in actual operation. Either the manufacturer or the licensee must obtain transmitter type acceptance for the transmitter by filing a application for type acceptance with appropriate information concerning the signal waveforms and measurements.

(b) Instructional television fixed stations are not required to attenuate the lower sideband by any specified amount unless interference to the reception of another station results from emissions in excess of those permitted television broadcast stations, in which case the attenuation specified in § 73.687(a)(3) of this chapter shall apply. However, in no case shall the amplitude of any lower sideband component exceed the amplitude of the upper sideband component having the highest amplitude.

[28 FR 13731, Dec. 14, 1963, as amended at 49 FR 32596, Aug. 15, 1984]

§ 74.939 Special rules governing ITFS response stations.

(a) An ITFS response station is authorized to provide communication by voice and/or data signals with its associated instructional television fixed station for use in instructional or computer-assisted communications. Other communications concerning the technical operation of the system may be carried on when necessary.

(b) An ITFS response station may be operated only by the licensee of an instructional television fixed station and only at an authorized receiving location of the instructional television fixed station with which it communicates. More than one ITFS response station may be operated at the same or different locations by the same licensee. An application for authority to operate a new or modified response station shall be filed with the Commission in Washington, DC, on FCC Form 330. Section VI of that form shall supply the following information for each response station:

(1) The name of the school or other description of the building in which the ITFS response station will be located, the address, and the geographic coordinates of the ITFS response station transmitting antenna.

(2) The manufacturer's name, type number, operating frequency, and power output of the proposed ITFS response station transmitter.

(3) The type of transmitting antenna, power gain, and azimuthal orientation of the major lobe of radiation in degrees measured clockwise from True North.

(4) A sketch giving pertinent details of the ITFS response station transmitting antenna installation including ground elevation of the transmitter site above mean sea level; overall height above ground, including appurtenances, of any ground-mounted tower or mast on which the transmitting antenna will be mounted or, if the

tower or mast is or will be located on an existing building or other manmade structure, the separate heights above ground of the building and the tower or mast including appurtenances; the location of the tower or mast on the building; the location of the transmitting antenna on the tower or mast; and the overall height of the transmitting antenna above ground. This can be combined with the sketch for the receiving location if the transmitting antenna is clearly shown.

(c) See Part 17 of this chapter concerning notification to the Federal Aviation Administration of proposed antenna construction or alteration. The provisions of §§ 74.967 and 74.981(a)(5), concerning antenna painting and lighting requirements, apply to ITFS response stations as well as main ITFS stations.

(d) All ITFS response stations communicating with a single instructional television fixed station shall operate on the same frequency. The specified frequency which may be used is determined by the channel assigned to the instructional television fixed station with which it is communicating, as shown in the following table. Operation on other ITFS response channels is prohibited.

ITFS Channel No.	Response-Frequency (MHz)
A-1	2686.0625
A-2	2687.0625
A-3	2688.0625
A-4	2689.0625
B-1	2686.1875
B-2	2687.1875
B-3	2688.1875
B-4	2689.1875
C-1	2686.3125
C-2	2687.3125
C-3	2688.3125
C-4	2689.3125
D-1	2686.4375
D-2	2687.4375
D-3	2688.4375
D-4	2689.4375
E-1	2686.5625
E-2	2687.5625
E-3	2688.5625
E-4	2689.5625
F-1	2686.6875
F-2	2687.6875
F-3	2688.6875
F-4	2689.6875
G-1	2686.8125
G-2	2687.8125
G-3	2688.8125
G-4	2689.8125

(e) Transmitter power output will normally be limited to no more than 250 milliwatts. Upon a special showing of need, transmitter power output of up to 2 watts may be permitted.

(f) An ITFS response channel is 125 kHz wide and is centered at the assigned frequency. Either amplitude or frequency modulation can be employed. If amplitude modulation is used, the carrier shall not be modulated in excess of 100%. If frequency modulation is used, the deviation shall not exceed ±25 kHz. Any emissions outside the channel including harmonics shall be attenuated at least 60 dB below peak output power. Greater attenuation may be required if interference is caused by out-of-channel emissions.

(g) The unmodulated carrier frequency shall be maintained within 35 kHz of the assigned frequency at all times. Adequate means shall be provided to insure compliance with this rule.

(h) A directive transmitting antenna shall be employed, oriented toward the transmitter site of the associated instructional television fixed station. The beamwidth between half power points shall not exceed 15° and radiation in any minor lobe of the antenna radiation pattern shall be at least 20 dB below the power in the main lobe of radiation.

(i) The transmitter of an ITFS response station may be operated unattended provided that the transmissions are observed by the operator on duty at the associated instructional television fixed station, who shall take such steps as may be necessary to correct any condition of improper operation. The overall performance of the ITFS response station transmitter shall be checked as often as necessary to ensure that it is functioning in accordance with the requirements of the Commission's rules. The licensee of an ITFS response station is responsible for the proper operation of the transmitter at all times. The transmitter shall be installed and protected in such manner as to prevent tampering or operation by unauthorized persons.

(j) The transmitting apparatus employed at ITFS response stations shall have received type acceptance in accordance with § 74.952.

(k) An ITFS response station shall be operated only when engaged in communication with its associated instructional television fixed station or for necessary equipment or system tests and adjustments. Radiation of an unmodulated carrier and other unnecessary transmissions are forbidden.

[34 FR 12101, July 18, 1969, as amended at 35 FR 4705, Mar. 18, 1970; 36 FR 11587, June 16, 1971; 48 FR 44807, Sept. 30, 1983; 52 FR 3806, Feb. 6, 1987; 53 FR 36788, Sept. 22, 1988]

§ 74.950 Equipment performance and installation.

(a) Except as otherwise provided in this section, the requirements of § 73.687 of this chapter regarding the installation and performance of television broadcast transmitters and associated equipment shall apply to instructional television fixed stations.

(b) The overall attenuation characteristics of the transmitter may vary from those specified in § 73.687 of this chapter to the extent that such variations result from permissible lower sideband radiation. However, care should be exercised in the adjustment of the transmitter to insure correct overall response of the transmitter for proper transmission of the upper and vestigial lower sideband.

(c) The provisions of § 74.961 in lieu of § 73.687(c)(1) of this chapter apply with respect to the frequency tolerance for the visual carrier.

(d) The provisions of § 74.936 in lieu of § 73.687(i)(1) of this chapter apply with respect to spurious emissions and radio frequency harmonics.

(e) The requirements of § 73.687(c)(2) of this chapter will be considered to be met insofar as measurements of operating power are concerned, if the transmitter is equipped with instruments for determining the combined visual and aural operating power. However, licensees are expected to maintain the operating powers within the limits specified in the rules of this part. Measurements of the separate visual and aural operating powers should be made at sufficiently frequent intervals to ensure compliance with the rules.

(f) Transmitting apparatus (translators and boosters) used solely for relaying signals received from other ITFS stations and operating in the manner described in § 74.934(a)(2) shall meet the following requirements before being type accepted by the Commission.

(1) The frequency converter and associated amplifiers shall be so designed that the electrical characteristics of a standard television signal introduced into the input terminals will not be significantly altered by passage through the apparatus except as to frequency and amplitude. The overall response of the apparatus within its assigned channel when operating at its rated power output and measured at the output terminals, shall provide a smooth curve, varying within limits separated by no more than 4 dB: *Provided, however,* That means may be provided to reduce the amplitude of the aural carrier below those limits, if necessary to prevent intermodulation which would mar the quality of the retransmitted picture or result in emissions outside of the assigned channel.

(2) The suppression of emissions appearing outside of the assigned channel shall comply with § 74.936(b) and (c).

(3) The local oscillator employed in the frequency converter shall maintain its operating frequency within 0.02 percent of its rated frequency when subjected to variations in ambient temperature between minus 30° and plus 50° centigrade and variations in powerline voltage between 85 percent and 115 percent of the rated supply voltage.

(4) The apparatus shall contain automatic circuits which will maintain peak visual power output constant within 2 dB when the strength of the input signal is varied over a range of 30 dB and which will not permit the peak visual power output to exceed the maximum rated power output under any conditions. If a manual adjustment is provided to compensate for different average signal strengths,

provision shall be made for determining the proper setting for the control. If improper adjustment of the control could result in improper operation a label bearing a suitable warning shall be affixed at the adjustment control: *Provided, however,* That apparatus with an output of 50 milliwatts peak visual power per channel or less need not comply with this paragraph, provided the equipment is so designed that the rated output power of the transmitter cannot be exceeded by more than 3 dB by an increase in the input signal.

(5) The apparatus shall be equipped with automatic controls which will place it in a nonradiating condition when no signal is being received on the input channel, either due to absence of a transmitted signal or failure of the receiving portion of the relay transmitter. In the case of equipment (translators or boosters) of 50 milliwatts peak visual power per channel or less relaying more than one channel it shall be turned off in the absence of the last signal to be relayed. The automatic control may include a time delay feature to prevent interruptions in the operation of the relay transmitter caused by fading or other momentary failures of the incoming signal.

(6) The tube(s) or transistor(s) employed in the final radio frequency amplifier shall be of the appropriate power rating to provide the rated power output of the relay transmitter. The normal operating constants for operation at the rated power output shall be specified. The apparatus shall be equipped with suitable meters or meter jacks so that appropriate voltage and current measurements may be made while the apparatus is in operation.

(7) Boosters used in this service shall comply with all the provisions of this paragraph except with paragraph (f)(3). However, in addition, the isolation between the input and output circuits of the booster, including the receiving and transmitting antenna systems shall be at least 20 dB greater than the maximum overall gain of the booster amplifier. Boosters may use opposite antenna polarization of the input and output antennas.

[28 FR 13731, Dec. 14, 1963, as amended at 36 FR 8873, May 14, 1971; 48 FR 44807, Sept. 30, 1983]

§ 74.951 Modification of transmission systems.

Formal application on FCC Form 330 is required for any of the following changes or modifications of the transmission systems:

(a) Replacement of the transmitter as a whole, except replacement with a transmitter of identical power rating which has been type accepted by the FCC for use by instructional TV fixed stations, or any change which could result in a change in the electrical characteristics or performance of the station. Upon the installation or modification of the transmitting equipment for which prior FCC authority is not required under the provisions of this paragraph, the licensee shall place in the station records a certification that the new installation complies in all respects with the technical requirements of this part and the terms of the station authorization.

(b) Any change in the antenna system affecting the direction of radiation, directive radiation pattern, antenna gain, or radiated power.

(c) Any change in the overall height of the antenna structure, except where notice to the Federal Aviation Administration is specifically not required under § 17.14(b) of the FCC Rules.

(d) Any change in the location of the transmission system except a move within the same building or upon the same antenna supporting structure.

(e) A change in frequency assignment.

(f) A change in the operating power.

(g) Any addition of receiving locations or to modify such a location to a receive and response station.

[45 FR 26068, Apr. 17, 1980, as amended at 50 FR 26761, June 28, 1985; 52 FR 3806, Feb. 6, 1987; 53 FR 36788, Sept. 22, 1988]

§ 74.952 Acceptability of equipment for licensing.

Each authorization for a station in this service requires the use of type accepted equipment. Requirements for obtaining a grant of equipment authorization are contained in subpart J of part 2 of the Rules.

(a) An application specifying a transmitter, translator, or booster not type accepted, may be filed by the applicant if the information and measurement data required for type acceptance under subpart J of part 2 of the Rules is submitted with the application. However, if that data has been filed with the Commission in connection with a request for type acceptance, it need not be resubmitted and may be referred to as "on file."

[52 FR 3806, Feb. 6, 1987]

§ 74.961 Frequency tolerance.

(a) The frequency of the visual carrier shall be maintained within 60 kHz of the assigned frequency at all times when the station is in operation.

(b) The frequency of the aural carrier shall be maintained in accordance with the provisions of § 73.687(c)(1) of this chapter.

[28 FR 13731, Dec. 14, 1963, as amended at 52 FR 10571, Apr. 2, 1987]

§ 74.962 Frequency monitors and measurements.

Suitable measurements shall be made as often as necessary to ensure that the operating frequencies of the station are within the prescribed tolerances.

[52 FR 3806, Feb. 6, 1987]

§ 74.963 Time of operation.

(a) An instructional television fixed station is not required to adhere to any regular schedule of operation. Unless otherwise specified in the license, the hours of operation are not limited.

(b) Except for purposes of tests and adjustments, the transmitter shall not be permitted to radiate unmodulated carriers or otherwise make unnecessary transmissions for extended periods of time.

§ 74.965 Posting of station license.

(a) The instrument of authorization of a clearly legible photocopy thereof, shall be available at each transmitter.

(b) If a station is operated unattended, the call sign and name of the licensee shall be displayed such that it may be read within the vicinity of the transmitter enclosure or antenna structure.

[52 FR 3807, Feb. 6, 1987]

§ 74.969 Copies of the rules.

The licensee of an instructional television fixed station shall have current copies of parts 73 and 74, and in cases where aeronautical hazard marking of antennas is required, part 17 of this chapter available for use by the operator in charge. Both the licensee and the operator or operators responsible for the proper operation of the station are expected to be familiar with the pertinent rules governing instructional television fixed stations.

§ 74.970 Modulation limits.

(a) *Visual transmitter.* The maximum excursion of the luminance signal in the white direction shall not exceed the value specified in § 73.682(a)(13) of this chapter for the reference white level.

(b) *Aural transmitter.* The maximum frequency deviation of the aural carrier shall not be permitted to exceed ± 75 kHz on peaks of frequent recurrence during any transmission. This is defined as 100% modulation.

[28 FR 13731, Dec. 14, 1963, as amended at 49 FR 32596, Aug. 15, 1984]

§ 74.971 Modulation monitors and measurements.

Suitable means shall be provided to insure that the modulation limits specified in § 74.970 are observed.

§ 74.982 Station identification.

(a) Call signs for instructional television fixed stations will consist of three letters and three digits pursuant to the provisions of § 2.302 of this chapter relating to fixed stations.

(b) Except as otherwise provided in paragraphs (c) and (d) of this section, each instructional television fixed station shall transmit its call sign at the beginning and end of each period of operation and, during operation, on the hour. Visual or aural transmissions shall be employed.

(c) The hourly station identification announcement during operation may be deferred if it would interrupt a single consecutive demonstration, lecture, or other similar discourse or otherwise impair the continuity of a program in progress. In such cases the station identification announcement shall be made at the first normal break in the continuity of the program.

(d) In cases where an instructional television fixed station is operating as a relay for signals originating at some other station operated by the same licensee, its call sign shall be announced by the originating station at the times and in the manner prescribed in paragraph (b) of this section.

(e) Where an instructional television fixed station is operating as a relay for signals originating at a station operated by some other licensee, its call sign may be transmitted by the originating station, if suitable arrangements can be made with the other licensee, or means shall be provided for the transmission of the call sign by the relay transmitter itself. Low power relay stations, authorized by § 74.950(f)(4) will not be assigned individual call signs. Station identification will be accomplished by the retransmission of the call sign of the primary station.

(f) Temporary fixed ITFS stations shall identify with the call sign of the primary station and a temporary fixed identifier.

[28 FR 13731, Dec. 14, 1963, as amended at 36 FR 8873, May 4, 1971; 38 FR 25991, Sept. 17, 1973; 49 FR 32596, Aug. 15, 1984]

§ 74.984 Retransmissions.

An instructional television fixed station may not retransmit the signals of any class of station without consent of the station originating the signals to be retransmitted.

Subparts J—K [Reserved]

Subpart L—FM Broadcast Translator Stations and FM Broadcast Booster Stations

SOURCE: 35 FR 15388, Oct. 2, 1970, unless otherwise noted.

§ 74.1201 Definitions.

(a) *FM translator.* A station in the broadcasting service operated for the purpose of retransmitting the signals of an FM radio broadcast station or another FM broadcast translator station without significantly altering any characteristics of the incoming signal other than its frequency and amplitude, in order to provide FM broadcast service to the general public.

(b) *Commercial FM translator.* An FM broadcast translator station which rebroadcasts the signals of a commercial FM radio broadcast station.

(c) *Noncommercial FM translator.* An FM broadcast translator station which rebroadcasts the signals of a noncommercial educational FM radio broadcast station.

(d) *Primary station.* The FM radio broadcast station radiating the signals which are retransmitted by an FM broadcast translator station or an FM broadcast booster station.

(e) *FM radio broadcast station.* When used in this Subpart L, the term FM broadcast station or FM radio broadcast station refers to commercial and noncommercial educational FM radio broadcast stations as defined in § 2.1 of this chapter, unless the context indicates otherwise.

(f) *FM broadcast booster station.* A station in the broadcasting service operated for the sole purpose of retransmitting the signals of an FM radio broadcast station, by amplifying and reradiating such signals, without significantly altering any characteristic of the incoming signal other than its amplitude.

[35 FR 15388, Oct. 2, 1970, as amended at 45 FR 37842, June 5, 1980; 52 FR 31405, Aug. 20, 1987]

§ 74.1202 Frequency assignment.

(a) An applicant for a new FM broadcast translator station or for changes in the facilities of an authorized translator station shall endeavor to select a channel on which its operation is not likely to cause interference to the reception of other stations. The application must be specific with regard to the frequency requested. Only one output channel will be assigned to each translator station.

(b) Subject to compliance with all the requirements of this subpart, FM broadcast translators may be authorized to operate on the following FM channels regardless of whether they are assigned for local use in the FM Table of Assignments (§ 73.202(b) of this chapter):

(1) Commercial FM translators: Channels 221, 224, 228, 232, 237, 240, 244, 249, 252, 257, 261, 265, 269, 272, 276, 280, 285, 288, 292, and 296.

(2) Noncommercial FM translators: The channels available for noncommercial use under § 73.501 of this chapter;

(3) In Alaska, FM translators operating on Channels 201-260 (88.1-99.9 MHz) shall not cause harmful interference to and must accept interference from non-Government fixed operations authorized prior to January 1, 1982.

(c) No minimum distance separation between FM translators operating on the same channel is specified. However, assignments which will obviously result in mutual interference between translators will not be made.

(d) Adjacent channel assignments will not be made to FM translators intended to serve all or part of the same area.

(e) An FM broadcast booster station will be assigned the channel assigned to its primary station.

NOTE: A translator must comply with the mileage separations to Mexican FM channel assignments and authorizations as Class D FM stations set forth in the Note to § 73.207 of this chapter.

[35 FR 15388, Oct. 2, 1970, as amended at 39 FR 12990, Apr. 10, 1974; 47 FR 30068, July 12, 1982; 52 FR 8260, Mar. 17, 1987]

§ 74.1203 Interference.

(a) FM translators and FM boosters will be authorized and permitted to continue to operate only where they cause no interference to the direct reception by the public of the off-the-air signals of any authorized broadcast station including Class D (secondary) noncommercial educational FM stations. FM translators and FM boosters shall not cause harmful interference to the transmissions of any other authorized radio station nor shall an FM translator or FM booster cause interference to reception by a television broadcast translator station of its input signals. FM translator stations or FM booster stations which may cause any such interference will not be authorized. FM booster stations will be exempt from the provisions of this paragraph to the extent that they may cause limited interference to their primary stations' signals subject to the conditions of paragraph (e) of this section.

(b) Interference will be considered to occur whenever reception to a regularly used off-the-air signal by viewers or listeners is impaired by the signals radiated by the translator or booster, regardless of the quality of such reception, the strength of the signals so used, or the channel on which the protected signal is transmitted.

(c) If interference cannot be promptly eliminated by the application of suitable techniques, operation of the offending translators or booster shall be immediately suspended and shall not be resumed until the interference has been eliminated. Short test transmissions may be made during the period of suspended operation to check the efficacy of remedial measures. If a complainant refuses to permit the translator or booster licensee to apply remedial techniques which demonstrably will eliminate the interference without impairment to the original reception, the licensee of the translator or booster is absolved of further responsibility.

(d) It shall be the responsibility of the licensee of an FM translator station or FM booster station to correct any condition of interference which results from the radiation of radio frequency energy by its equipment on any frequency outside the assigned channel. Upon notice by the Commission to the station licensee or operator that such interference is being caused, the operation of the translator station or booster station shall be immediately suspended and shall not be resumed until the interference has been eliminated or it can be demonstrated that the interference is not due to spurious emissions by the FM translator station or FM booster station: *Provided, however,* That short test transmissions may be made during the period of suspended operation to check the efficacy of remedial measures.

(e) An FM booster station may not disrupt the existing service of its primary stations nor may it cause interference to the signal provided by the primary station within the boundaries of the principal community to be served.

[52 FR 31405, Aug. 20, 1987]

§ 74.1231 Purpose and permissible service.

(a) FM translators provide a means whereby the signals of FM broadcast stations may be retransmitted to areas in which direct reception of such FM broadcast stations is unsatisfactory due to distance or intervening terrain barriers.

(b) Except as provided in paragraphs (f) and (g) of this section, an FM translator may be used only for the purpose of retransmitting the signals of an FM broadcast station or another FM translator station which have been received directly through space, converted, and suitably amplified. However, a noncommercial educational FM translator operating on a reserved channel (Channels 200-220) and owned and operated by the licensee of the primary noncommercial educational FM station it rebroadcasts may use alternative signal delivery means including, but not limited to, satellite and microwave facilities, if the applicant complies with either paragraph (b)(1) or (2) of this section:

(1) The applicant demonstrates that:

(i) The transmitter site of the proposed FM translator station is within 80 kilometers from the predicted 1 mV/m contour of the primary station to be rebroadcast; or,

(ii) The transmitter site of the proposed FM translator station is more than 160 kilometers from the transmitter site of any authorized full service noncommercial educational FM station; or,

(iii) The application is mutually exclusive with an application containing the showing as required by § 74.1231(b) (2)(i) or (ii); or,

(iv) The application is filed after October 1, 1992.

(2) If the transmitter site of the proposed FM translator station is more than 80 kilometers from the predicted 1 mV/m contour of the primary station to be rebroadcast or is within 160 kilometers of the transmitter site of any authorized full service noncommercial educational FM station the applicant must show that:

(i) An alternative frequency can be used at the same site as the proposed FM translator's transmitter location and can provide signal coverage to the same area encompassed by the applicant's proposed 1 mV/m contour; or,

(ii) An alternative frequency can be used at a different site and can provide signal coverage to the same area encompassed by the applicant's proposed 1 mV/m contour.

(c) The transmissions of each FM translator shall be intended for direct reception by the general public and any other use shall be incidental thereto. An FM translator shall not be operated solely for the purpose of relaying signals to one or more fixed received points for retransmission, distribution, or further relaying.

(d) The technical characteristics of the retransmitted signals shall not be deliberately altered so as to hinder reception on conventional FM broadcast receivers.

(e) An FM translator shall not deliberately retransmit the signals of any station other than the station it is authorized by license to retransmit. Precautions shall be taken to avoid unintentional retransmission of such other signals.

(f) A locally generated radio frequency signal similar to that of an FM broadcast station and modulated with aural information may be connected to the input terminals of an FM translator for the purpose of transmitting voice announcements. The radio frequency signals shall be on the same channel as the normally used off-the-air signal being rebroadcast. Connection of the locally generated signals shall be made automatically by means of a time-switch when transmitting originations concerning financial support. The connection for emergency transmissions may be made manually. The apparatus used to generate the local signal that is used to modulate the FM translator must be capable of producing an aural signal which will provide acceptable reception on FM receivers designed for the transmission standards employed by FM broadcast stations.

(g) The aural material transmitted as permitted in paragraph (f) of this section shall be limited to emergency warnings of imminent danger and to seeking or acknowledging financial support deemed necessary to the continued operation of the translator. Accordingly, the originations concerning financial support are limited to 30 seconds no more than once an hour and to the solicitation of contributions toward defrayal of the costs of installation, operation, and maintenance of the translator or acknowledgments of financial support for those purposes. Such acknowledgments may include identification of the contributors, the size or nature of the contributions and advertising messages of contributors. Emergency transmissions shall be no longer or more frequent than necessary to protect life and property.

(h) FM broadcast booster stations provide a means whereby the licensee of an FM broadcast station may provide service to areas of low signal strength in any region within the primary station's predicted service contour. An FM broadcast booster station is authorized to retransmit only the signals of its primary station; it shall not retransmit the signals of any other station nor make independent transmissions: *Provided, however,* That locally generated signals may be used to excite the booster apparatus for the purpose of conducting tests and measurements essential to the proper installation and maintenance of the apparatus.

NOTE: In the case of an FM broadcast station authorized with facilities in excess of those specified by § 73.211 of this chapter, an FM booster station will only be authorized within the 1 mV/m contour as predicted on the basis of the maximum powers and heights set forth in that section for the applicable class of FM broadcast station concerned.

(i) The transmissions of an FM broadcast booster station shall be intended for direct reception by the general public. Such stations will not be authorized to establish a point-to-point FM radio relay system.

[35 FR 15388, Oct. 2, 1970, as amended at 45 FR 37842, June 5, 1980; 52 FR 31406, Aug. 20, 1987; 53 FR 14803, Apr. 26, 1988; 54 FR 35342, Aug. 25, 1989]

§ 74.1232 Eligibility and licensing requirements.

(a) Subject to the restrictions set forth in paragraph (d) of this section, a license for an FM broadcast translator station may be issued to any qualified individual, organized group of individuals, broadcast station licensee, or local civil governmental body, upon an appropriate showing that plans for financing the installation and operation of the translator are sufficiently sound to assure prompt construction of the translator and dependable service.

(b) More than one FM translator may be licensed to the same applicant, whether or not such translators serve substantially the same area, upon an appropriate showing of need for such additional stations. FM translators are not counted as FM stations for the purpose of § 73.3555, concerning multiple ownership.

(c) Only one input and one output channel will be assigned to each FM translator. Additional FM translators may be authorized to provide additional reception. A separate application is required for each FM translator and each application shall be complete in all respects.

(d) An authorization for a commercial FM translator which is intended to provide reception to places which are beyond the predicted 1 mV/m field strength contour of the primary station and within the predicted 1 mV/m field strength contour of another commercial FM radio broadcast station assigned to a different principal community will not be granted to:

(1) The licensee or permittee of an FM broadcast station, or

(2) An applicant who receives from such FM radio broadcast station licensee or permittee or from any person associated therewith, directly or indirectly, any financial support or contribution toward the costs incurred up to the time such translator commences operation.

NOTE 1: The 1 mV/m field strength contour of an FM radio broadcast station, for the purposes of this subpart, shall be the contour as predicted in accordance with § 73.313(a) through (d) of this chapter. See Note, § 74.1231(h).

NOTE 2: Financial support prohibited in paragraph (d) of this section includes only support for the preparation, filing and prosecution of applications for new FM translators, for the acquisition and installation of transmitting and other apparatus employed by such FM translators, and for the defrayal of any other costs necessary to placing such FM translators in operation. Paragraph (d) of this section thus will not bar or limit contributions or support, by any station licensee or permittee or any person associated therewith, for the operation or maintenance of an FM translator, whether such support is provided in the form of financial contributions or by providing operation or maintenance services or advice.

(e) An FM broadcast booster station will be authorized only to the licensee or permittee of the FM radio broadcast station whose signals the booster station will retransmit, to serve areas within the predicted service contour of the primary station, subject to Note, § 74.1231(h).

(f) No numerical limit is placed upon the number of FM booster stations which may be licensed to a single licensee. A separate application is required for each FM booster station. FM broadcast booster stations are not counted as FM broadcast stations for the purposes of § 73.3555, concerning multiple ownership.

(g) Any authorization for an FM translator station issued to an applicant described in paragraph (d) of this section will be issued subject to the condition that it may be terminated at any time, upon not less than sixty (60) days written notice, where the circumstances in the community or area served are so altered as to have prohibited grant of the application had such circumstances existed at the time of its filing.

[35 FR 15388, Oct. 2, 1970, as amended at 43 FR 14660, Apr. 7, 1978; 52 FR 10571, Apr. 2, 1987; 52 FR 31406, Aug. 20, 1987]

§ 74.1234 Unattended operation.

(a) A station authorized under this subpart may be operated without a licensed radio operator in attendance if the following requirements are met:

(1) If the transmitter site cannot be reached promptly at all hours and in all seasons, means shall be provided so that the transmitting apparatus can be turned on and off at will from a point which is readily accessible at all hours and in all seasons.

(2) The transmitter shall also be equipped with suitable automatic circuits which will place it in a nonradiating condition in the absence of a signal on the input channel.

(3) The on-and-off control (if at a location other than the transmitter site) and the transmitting apparatus, shall be adequately protected against tampering by unauthorized persons.

(4) The Commission shall be supplied with the name, address, and telephone number of a person or persons who may be contacted to secure suspension of operation of the translator promptly should such action be deemed necessary by the Commission. Such information shall be kept current by the licensee.

(5) Where the antenna and supporting structure are required to be painted and lighted under the provisions of Part 17 of this chapter, the licensee shall make suitable arrangements for the daily inspection and logging of the obstruction lighting and associated control equipment as required by §§ 17.47, 17.48, and 17.49 of this chapter.

(b) An application for authority to construct a new station pursuant to this subpart or to make changes in the facilities of such a station, which proposes unattended operation shall include an adequate showing as to the manner of compliance with this section.

(c) Unless the applicant specifically requests unattended operation and makes the showing required by paragraph (b) of this section, a licensed radio operator meeting the requirements of § 74.1266 shall be on duty at the transmitter site whenever the station is operated.

[35 FR 15388, Oct. 2, 1970, as amended at 37 FR 18540, Sept. 13, 1972; 38 FR 25992, Sept. 17, 1973]

§ 74.1235 Power limitations.

(a) The power output of the final radio frequency amplifier of an FM translator shall not exceed 10 watts.

except that FM broadcast translator stations serving areas east of the Mississippi River or in Zone I-A shall be limited to 1 watt. This power may be fed into a single transmitting antenna or may be divided between two or more transmitting antennas or arrays of antennas or any manner found useful or desirable by the licensee. In individual cases, the Commission may authorize the use of more than one final radio frequency amplifier at a single station under the following conditions:

(1) Each such amplifier shall be used to serve a different community or area. More than one final radio frequency amplifier shall not be authorized to provide service to all or part of the same community or area, except as provided in paragraph (a)(2) of this section.

(2) The transmitting antennas or antenna arrays shall be so designed and installed that the radiated fields from the separate antennas shall not combine in any direction in any single plane of polarization to achieve the effect of radiated power in excess of that which would be produced by a single antenna or antenna array fed by a radio frequency amplifier with power output no greater than that authorized pursuant to paragraph (a) of this section. Two radio frequency amplifiers may be used to serve the same community if one is used to feed an antenna designed to produce a horizontally polarized signal, and the other a vertically polarized signal.

NOTE: The provisions of § 74.1235(a)(1) and (2) will not apply to 1-watt stations serving areas west of the Mississippi River outside of Zone I-A. See § 73.205(b) of this chapter.

(3) Stations authorized under this subpart employing multiple radiofrequency amplifiers will be licensed as a single station.

(4) No limit is placed upon the effective radiated power which may be obtained by the use of horizontally or vertically or horizontally and vertically polarized directive transmitting antennas.

(b) In no event shall a station authorized under this subpart be operated with a power output in excess of the transmitter type-accepted rating.

(c) The output power of FM booster stations shall be limited such that the predicted service contour of such stations, computed in accordance with § 73.313(a)-(d), may not extend beyond the area covered by the predicted service contour of the primary station that they rebroadcast and that such output power may not exceed 20 percent of the maximum allowable effective radiated power for the primary station's class. Further, FM booster stations shall be subject to the requirement that the signal of any first adjacent channel station must exeed the signal of the booster station by 6 dB at all points within the protected contour of any first adjacent channel station, except that in the case of FM stations on adjacent channels at spacings that do not meet the minimums specified in § 73.207, the signal of any first adjacent channel station must exceed the signal of the booster by 6 dB at any point within the predicted interference free contour of the adjacent channel station.

[35 FR 15388, Oct. 2, 1970, as amended at 40 FR 29862, July 16, 1975; 52 FR 31406, Aug. 20, 1987; 53 FR 4169, Feb. 12, 1988]

§ 74.1236 Emission and bandwidth.

(a) The license of a station authorized under this subpart authorizes the transmission of each F3 or other types of frequency modulation upon a showing of need as long as the emission complies with the following:

(1) For transmitter output powers no greater than 10 watts, paragraphs (b), (c), and (d) of this section apply.

(2) For transmitter output powers greater than 10 watts, § 73.317 (a), (b), (c), and (d) apply.

(b) Standard width FM channels will be assigned and the transmitting apparatus shall be operated so as to limit spurious emissions to the lowest practicable value. Any emissions including intermodulation products and radiofrequency harmonics which are not essential for the transmission of the desired aural information shall be considered to be spurious emissions.

(c) The power of emissions appearing outside the assigned channel shall be attenuated below the total power of the emission as follows:

Distance of emission from center frequency	Minimum attenuation below unmodulated carrier
120 to 240 kHz	25 dB
Over 240 and up to 600 kHz	35 dB
Over 600 kHz	60 dB

(d) Greater attenuation than that specified in paragraph (c) of this section may be required if interference results outside the assigned channel.

[35 FR 15388, Oct. 2, 1970, as amended at 52 FR 31406, Aug. 20, 1987]

§ 74.1237 Antenna location.

(a) An applicant for a new station to be authorized under this subpart or for a change in the facilities of such a station shall endeavor to select a site which will provide a line-of-sight transmission path to the entire area intended to be served and at which there is available a suitable signal from the primary station. The transmitting antenna should be placed above growing vegetation and trees lying in the direction of the area intended to be served, to minimize the possiblity of signal absorption by foliage.

(b) Consideration should be given to accessibility of the site at all seasons of the year and to the availability of facilities for the maintenance and operation of the FM translator.

(c) Consideration should be given to the existence of strong radiofrequency fields from other transmitters at the translator site and the possibility that such fields may result in the retransmission of signals originating on frequencies other than that of the primary station.

(d) The transmitting antenna of an FM broadcast booster station shall be located within the predicted 1 mV/m field strength contour of its primary station, subject to note, § 74.1231(h).

§ 74.1250 Transmitters and associated equipment.

(a) FM translator and booster transmitting apparatus used by stations authorized under the provisions of this subpart may only use transmitting apparatus that has been type accepted for such use in accordance with Subpart J of Part 2. Translator stations authorized for transmitter output power of 10 watts also may use FM broadcast transmitters notified or type accepted to operate with an output power not exceeding 10 watts under the provisions of Part 73 of the Rules for broadcast stations.

(b) Transmitting antennas, antennas used to receive signals to be rebroadcast, and transmission lines are not subject to the requirement for type acceptance.

(c) The following requirements must be met before translator or booster equipment of 10 watts or less output power will be type accepted by the Commission:

(1) The frequency converter and associated amplifiers of an FM translator shall be so designed that the electrical characteristics of a standard FM signal, including stereophonic subchannel, introduced into the input terminals will not be significantly altered by passage through the apparatus except as to frequency and amplitude. The overall frequency response of the apparatus within its assigned channel when operating at its rated power output and measured at the output terminals, shall provide a smooth curve, varying within limits separated by no more than 3 dB.

(2) Radiofrequency harmonics of the output carrier frequency measured at the output terminals of the transmitter, shall be attenuated at least 60 dB below the fundamental output carrier level. All other emissions appearing outside the assigned channel shall conform with the specifications set forth in § 74.1236(c).

(3) The local oscillator or oscillators employed in the translator equipment shall, when subjected to variations in ambient temperature between minus 30° and plus 50° centigrade and in primary supply voltage between 85 percent and 115 percent of the rated value, be sufficiently stable to maintain the output carrier frequency of the translator within plus or minus 0.005 percent of its assigned frequency, assuming zero variation of the received primary station signal from its assigned frequency.

(4) The apparatus shall contain automatic circuits which will maintain

the power output constant within 2 dB when the level of the signal at the input terminals is varied over a range of 40 dB and which will not permit power output to exceed the maximum rated power output under any condition. If a manual adjustment is provided to compensate for different average signal levels, provision shall be made for determining the proper setting for the control and if improper adjustment of the control could result in improper operations, a label shall be affixed at the adjustment control bearing a suitable warning.

(5) The apparatus shall be equipped with automatic controls which will place it in a nonradiating condition when no signal is being received on the input channel, either due to absence of a transmitter signal or failure of the receiving portion of the translator or booster. The automatic control may include a time delay feature to prevent interruptions in the operation of the station caused by fading or other momentary failures of the incoming signal.

(6) The amplifying devices employed n the final radiofrequency amplifier hall be of the appropriate power ating to provide the rated power utput of the translator or booster. The normal operating constants for peration at the rated power output hall be specified. The apparatus shall e equipped with suitable meters or neter jacks so that appropriate volt- ge and current measurements may be nade while the apparatus is in oper- tion.

(7) Transmitters of FM broadcast ranslator stations of more than 1 att transmitter output power shall e equipped with an automatic keying evice which will transmit the call gn assigned to the station, in Inter- ational Morse Code, at least once ach 60 minutes during the time the ation is in operation unless there is effect a firm agreement with the ation's primary station as provided § 74.1283(c)(1). Transmission of the all sign can be accomplished in either f the following ways:

(i) By frequency shift keying; the arrier shift shall not be less than 5 Hz nor greater than 25 kHz;

(ii) By amplitude modulation of the FM carrier of at least 30% modulation. The audio frequency tone used shall not be within 200 hertz of the Emergency Broadcast System Attention Signal alerting frequencies.

(8) Wiring, shielding, and construction shall be in accordance with accepted principles of good engineering practice.

(d) Booster station transmitters having power outputs in excess of 10 watts must meet the requirements of § 73.1660 of this chapter.

(e) The exciter employed to provide a locally generated and modulated input signal to the translator pursuant to § 74.1231(f) shall be type accepted and shall meet the following specifications for type acceptance by the Commission:

(1) The local oscillator or oscillators employed in the exciter, when subjected to variations in ambient temperature between minus 30° and plus 50° centigrade, and in primary supply voltage between 85 percent and 115 percent of the rated value, shall be sufficiently stable to maintain the output center frequency of the exciter within plus or minus 0.005 percent of the frequency assigned to the primary station.

(2) Automatic means shall be provided for limiting the level of the audio frequency voltage applied to the modulator to insure that a frequency swing in excess of 75 kHz will not occur under any condition of modulation.

(3) Wiring, shielding, and construction shall be in accordance with accepted principles of good engineering practice.

(f) Type acceptance will be granted only upon a satisfactory showing that the apparatus is capable of meeting the requirements of paragraphs (c) and (d) of this section. The following procedures shall apply:

(1) Any manufacturer of apparatus intended for use by a station authorized under this subpart may request type acceptance by following the procedures set forth in part 2, subpart F, of this chapter. Equipment found to be acceptable by the Commission will be listed in the "Radio Equipment List" published by the Commission.

These lists are available for inspection at any Field Office of the Commission and at the Washington, DC, offices of the Commission.

(2) Apparatus for use by stations authorized under this subpart which has been type accepted by the Commission will normally be authorized without additional measurements by the applicant.

(3) Other rules concerning type acceptance, including information regarding withdrawal of type acceptance, modification of type accepted equipment and limitations on the findings upon which type acceptance is based, are set forth in part 2, subpart J, of this chapter.

(g) The transmitting antenna may be designed to produce either horizontal or vertical polarization, or a combination of horizontal and vertical polarization. Separate transmitting antennas are permitted if both horizontal and vertical polarization is to be provided.

[35 FR 15388, Oct. 2, 1970, as amended at 40 FR 29863, July 16, 1975; 41 FR 17552, Apr. 27, 1976; 46 FR 35465, July 8, 1981; 50 FR 32417, Aug. 12, 1985; 52 FR 31406, Aug. 20, 1987; 53 FR 14803, Apr. 26, 1988]

§ 74.1251 Modification of transmission systems.

(a) No change, either mechanical or electrical, except as provided in § 2.1001 of this chapter, may be made in FM translator or booster apparatus which has been type accepted by the Commission without prior authority of the Commission.

(b) Formal application is required for any of the following changes to be made on FCC Form 346 in the case of FM broadcast translator stations and on FCC Form 349P in the case of FM broadcast booster stations:

(1) Replacement of the transmitter as a whole, except replacement with a transmitter of identical power rating which has been type accepted by the FCC for use by FM translator or FM booster stations, or any change which could result in the electrical characteristics or performance of the station. Upon the installation or modification of the transmitting equipment for which prior FCC authority is not required under the provisions of this paragraph, the licensee shall place in the station records a certification that the new installation complies in all respects with the technical requirements of this part and the terms of the station authorization.

(2) A change in the transmitting antenna system, including the direction of radiation or directive antenna pattern.

(3) Any change in the overall height of the antenna structure except where notice to the Federal Aviation Administration is specifically not required under § 17.14(b) of this chapter.

(4) Any change in the location of the translator or booster except a move within the same building or upon the same pole or tower.

(5) Any horizontal change in the location of the antenna structure which would (i) be in excess of 152.4 meters (500 feet), or (ii) would require notice to the Federal Aviation Administration pursuant to § 17.7 of the FCC's rules.

(6) Any change of input or output frequency of a translator.

(7) Any change of authorized transmitter operating power output.

(8) Any change in authorized principal community or area being served.

(c) A proposal to change the primary FM station being retransmitted by an FM translator station will be subject only to a notification requirement.

[35 FR 15388, Oct. 2, 1970, as amended at 45 FR 26068, Apr. 17, 1980; 47 FR 24580, June 7, 1982; 50 FR 3525, Jan. 25, 1985; 50 FR 23710, June 5, 1985]

§ 74.1261 Frequency tolerance.

The licensee of an FM translator station shall maintain the center frequency at the output of the translator within 0.01 percent of its assigned frequency. The output frequency of an FM booster station shall comply with the requirements of § 73.1545(b).

[52 FR 31406, Aug. 20, 1987]

§ 74.1262 Frequency monitors and measurements.

(a) The licensee of a station authorized under this subpart is not required to provide means for measuring the operating frequency of the transmitter. However, only equipment having the required stability will be approved for use by an FM translator or booster.

(b) In the event that a station authorized under this subpart is found to e operating beyond the frequency tolerance prescribed in § 74.1261, the li- ensee shall promptly suspend oper- tion of the station and shall not esume operation until the station has een restored to its assigned frequen- y. Adjustment of the frequency deter- ining circuits of an FM translator or ooster shall be made by a qualified erson in accordance with § 74.1250(g).

74.1263 Time of operation.

(a) An FM translator is not required o adhere to any regular schedule of peration. However, the licensee of an M translator is expected to provide a ependable service to the extent that uch is within its control and to avoid nwarranted interruptions to the serv- e provided.

(b) Failure of an FM translator sta- on to operate for a period of 30 days r more, except for causes beyond the ontrol of the licensee, shall be eemed evidence of discontinuance of peration and the license of the sta- on may be cancelled at the discretion the Commission.

(c) An FM translator shall not be ermitted to radiate during extended eriods when signals of the primary ation are not being retransmitted.

5 FR 15388, Oct. 2, 1970, as amended at 39 R 38653, Nov. 1, 1974; 47 FR 40175, Sept. , 1982; 50 FR 23710, June 5, 1985; 50 FR 417, Aug. 12, 1985]

74.1265 Posting of station license.

(a) The station license and any other strument of authorization or individ- l order concerning the construction the station or the manner of oper- ion shall be kept in the station cord file maintained by the licensee as to be available for inspection pon request to any authorized repre- ntative of the Commission.

(b) The call sign of the translator or oster together with the name, ad- ess, and telephone number of the li- nsee or local representative of the li- nsee if the licensee does not reside the community served by the trans- tor or booster, and the name and address of a person and place where station records are maintained, shall be displayed at the translator or booster site on the structure supporting the transmitting antenna, so as to be visible to a person standing on the ground at the transmitter site. The display shall be prepared so as to withstand normal weathering for a reasonable period of time and shall be maintained in a legible condition by the licensee.

[35 FR 15388, Oct. 2, 1970, as amended at 40 FR 24901, June 11, 1975]

§ 74.1269 Copies of rules.

The licensee or permittee of a station authorized under this subpart shall have a current copy of Volumes I and III of the Commission's rules and shall make the same available for use by the operator in charge. Each such licensee or permittee shall be familiar with those rules relating to stations authorized under this subpart. Copies of the Commission's rules may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

§ 74.1281 Station records.

(a) The licensee of a station authorized under this Subpart shall maintain adequate station records, including the current instrument of authorization, official correspondence with the FCC, maintenance records, contracts, permission for rebroadcasts, and other pertinent documents.

(b) Entries required by § 17.49 of this chapter concerning any observed or otherwise known extinguishment or improper functioning of a tower light:

(1) The nature of such extinguishment or improper functioning.

(2) The date and time the extinguishment of improper operation was observed or otherwise noted.

(3) The date, time and nature of adjustments, repairs or replacements made.

(c) The station records shall be maintained for inspection at a residence, office, or public building, place of business, or other suitable place, in one of the communities of license of the translator or booster, except that the station records of a booster or translator licensed to the licensee of the primary station may be kept at the same place where the primary station records are kept. The name of the person keeping station records, together with the address of the place where the records are kept, shall be posted in accordance with § 74.1265(b) of the rules. The station records shall be made available upon request to any authorized representative of the Commission.

(d) Station logs and records shall be retained for a period of two years.

[48 FR 44807, Sept. 30, 1983]

§ 74.1283 Station identification.

(a) Every station authorized under this subpart with transmitter output power of more than 1 watt shall be identified in accordance with the provisions of this section. Stations with transmitter output power of 1 watt or less need not be identified.

(b) FM Broadcast booster stations shall be identified by their primary stations by the broadcasting of the primary station's call letters and location, in accordance with the provisions of § 73.1201 of this chapter.

(c) FM broadcast translator stations with transmitter output power of more than 1 watt shall be identified by one of the methods prescribed herein:

(1) The licensee or permittee of such station may make arrangements with the licensee of its primary station for the broadcast by the primary station of the call letters and location of the translator station. Identification in this manner is to be accomplished three times each day: Once between the hours of 7 and 9 a.m., unless the primary station's broadcast day begins after 9 a.m., in which case identification will be made at the beginning of its broadcast day and at the other times specified herein; once between 12:55 p.m. and 1:05 p.m.; and once between the hours of 4 and 6 p.m. Arrangements will be made so that the licensee of the primary station will keep on record, and make available to any responsible person the call letters and location of each translator station rebroadcasting its signals, with the name, address, and telephone number of the licensee or the person designated to be contacted in case of malfunction of the translator. It shall be the responsibility of the translator licensee to furnish current information in this respect to the primary station.

(2) Where the licensee or permittee of an FM translator station has not made arrangements for station identification in accordance with paragraph (c)(1) of this section, such FM translator station shall transmit its call sign in International Morse Code at least once each 60 minutes during the time the station is in operation. The transmission may be accomplished by means of an automatic device as required by § 74.1250(c)(7). Call sign transmission shall be made at Code speed not in excess of 20 words per minute. At this speed, the transmission of each individual call sign will require approximately 4 seconds.

(d) The Commission may, in its discretion, specify other methods of identification.

(e) The call sign of an FM broadcast translator station will consist of the initial letter K or W followed by the channel number assigned to the translator and two letters. The use of the initial letter will generally conform to the pattern used in the broadcast service. The two letter combinations following the channel number will be assigned in order and requests for the assignment of particular combinations of letters will not be considered.

[35 FR 15388, Oct. 2, 1970, as amended at 41 FR 17552, Apr. 27, 1976; 51 FR 9966, Mar. 24, 1986]

§ 74.1284 Rebroadcasts.

(a) The term "rebroadcast" means the reception by radio of the programs or other signals of a radio station and the simultaneous retransmission of such programs or signals for direct reception by the general public.

(b) The licensee of an FM translator shall not rebroadcast the programs of any FM broadcast station or other FM translator without obtaining prior consent of the primary station whose programs are proposed to be retransmitted. The Commission shall be notified of the call letters of each station rebroadcast and the licensee of the FM translator shall certify that written consent has been received from the licensee of the station whose programs are retransmitted.

(c) An FM translator is not authorized to rebroadcast the transmissions of any class of station other than an FM broadcast station or another FM translator.

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V-Z [Reserved]

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ALPHABETICAL INDEX—PART 76

AUTHORITY: Secs. 2, 3, 4, 301, 303, 307, 308, 309, 48 Stat., as amended, 1064, 1065, 1066, 1081, 1082, 1083, 1084, 1085; 47 U.S.C. 152, 153, 154, 301, 303, 307, 308, 309.

SOURCE: 37 FR 3278, Feb. 12, 1972, unless otherwise noted.

Subpart A—General

§ 76.1 Purpose.

The rules and regulations set forth in this part provide for the certification of cable television systems and for their operation in conformity with standards for carriage of television broadcast signals, program exclusivity, cablecasting, access channels, and related matters.

§ 76.3 Other pertinent rules.

Other pertinent provisions of the Commission's rules and regulations relating to the Cable Television Service are included in the following parts of this chapter:

Part 0—Commission Organization.
Part 1—Practice and Procedure.
Part 21—Domestic Public Radio Services (Other Than Maritime Mobile).
Part 63—Extension of Lines and Discontinuance of Service by Carriers.
Part 64—Miscellaneous Rules Relating to Common Carriers.
Part 78—Cable Television Relay Service.
Part 91—Industrial Radio Services.

[37 FR 13864, June 14, 1972]

§ 76.5 Definitions.

(a) *Cable system or cable television system.* A facility consisting of a set of closed transmission paths and associated signal generation, reception, and control equipment that is designed to provide cable service which includes video programming and which is provided to multiple subscribers within a community, but such term does not include (1) a facility that services only to retransmit the television signals of one or more television broadcast stations; (2) a facility that serves only subscribers in one or more multiple unit dwellings under common ownership, control or management, unless such facility or facilities uses any public right-or-way; (3) a facility of a common carrier which is subject, in whole or in part, to the provisions of Title II of the Communications Act of 1934, as amended, except that such facililty shall be considered a cable system to the extent such facility is used in the transmission of video programming directly to subscribers; or (4) any facilities of any electric utility used solely for operating its electric utility systems.

NOTE: The provisions of subparts D and F of this part shall also apply to all facilities defined previously as cable systems on or before April 28, 1985.

(b) *Television station; television broadcast station.* Any television broadcast station operating on a channel regularly assigned to its community by § 73.606 of this chapter, and any television broadcast station licensed by a foreign government: *Provided, however,* That a television broadcast station licensed by a foreign government shall not be entitled to assert a claim to carriage or program exclusivity, pursuant to subpart D or F of this part, but may otherwise be carried if consistent with the rules.

(c) *Television translator station.* A television broadcast translator station as defined in § 74.701 of this chapter.

(d) *Grade A and Grade B contours.* The field intensity contours defined in § 73.683(a) of this chapter.

(e) *Specified zone of a television broadcast station.* The area extending 35 air miles from the reference point in the community to which that station is licensed or authorized by the Commission. A list of reference points is contained in § 76.53. A television broadcast station that is authorized but not operating has a specified zone that terminates eighteen (18) months after the initial grant of its construction permit.

(f) *Major television market.* The specified zone of a commercial television station licensed to a community listed in § 76.51, or a combination of such specified zones where more than one community is listed.

(g) *Designated community in a major television market.* A community listed in § 76.51.

(h) *Smaller television market.* The specified zone of a commercial television station licensed to a community that is not listed in § 76.51.

(i) *Significantly viewed.* Viewed in other than cable television households as follows: (1) For a full or partial network station—a share of viewing hours of at least 3 percent (total week hours), and a net weekly circulation of at least 25 percent; and (2) for an independent station—a share of viewing hours of at least 2 percent (total week hours), and a net weekly circulation of at least 5 percent. See § 76.54.

NOTE: As used in this paragraph, "share of viewing hours" means the total hours that noncable television households viewed the subject station during the week, expressed as a percentage of the total hours these households viewed all stations during the period, and "net weekly circulation" means the number of noncable television households that viewed the station for 5 minutes or more during the entire week, expressed as a percentage of the total noncable television households in the survey area.

(j) *Full network station.* A commercial television broadcast station that generally carries in weekly prime time hours 85 percent of the hours of programing offered by one of the three major national television networks with which it has a primary affiliation (i.e., right of first refusal or first call).

(k) *Partial network station.* A commercial television broadcast station that generally carries in prime time more than 10 hours of programming per week offered by the three major national television networks, but less than the amount specified in paragraph (j) of this section.

(l) *Independent station.* A commercial television broadcast station that generally carries in prime time not more than 10 hours of programing per week offered by the three major national television networks.

(m) A network program is any program delivered simultaneously to more than one broadcast station regional or national, commercial or noncommercial.

(n) *Prime time.* The 5-hour period from 6 to 11 p.m., local time, except that in the central time zone the relevant period shall be between the hours of 5 and 10 p.m., and in the mountain time zone each station shall elect whether the period shall be 6 to 11 p.m. or 5 to 10 p.m.

NOTE: Unless the Commission is notified to the contrary, a station in the mountain time zone shall be presumed to have elected the 6 to 11 p.m. period.

(o) *Cablecasting.* Programming (exclusive of broadcast signals) carried on a cable television system. See paragraphs (y), (z) and (aa) (Classes II, III, and IV cable television channels) of this section.

(p) *Origination cablecasting.* Programing (exclusive of broadcast signals) carried on a cable television system over one or more channels and subject to the exclusive control of the cable operator.

(q) *Legally qualified candidate.* (1) Any person who:

(i) Has publicly announced his or her intention to run for nomination or office;

(ii) Is qualified under the applicable local, State or Federal law to hold the office for which he or she is a candidate; and

(iii) Has met the qualifications set forth in either paragraphs (q)(2), (3) or (4) of this section.

(2) A person seeking election to any public office including that of President or Vice President of the United States, or nomination for any public office except that of President or Vice President, by means of a primary, general or special election, shall be considered a legally qualified candidate if, in addition to meeting the criteria set forth in paragraph (q)(1) of this section, that person:

(i) Has qualified for a place on the ballot, or

(ii) Has publicly committed himself or herself to seeking election by the write-in method and is eligible under applicable law to be voted for by sticker, by writing in his or her name on the ballot or by other method, and makes a substantial showing that he or she is a bona fide candidate for nomination or office.

persons seeking election to the office of President or Vice President of the United States shall, for the purposes of the Communications Act and the rules thereunder, be considered legally qualified candidates only in those States or territories (or the District of Columbia) in which they have met the requirements set forth in paragraphs (q)(1) and (2) of this rule; except that any such person who has met the requirements set forth in paragraphs (q)(1) and (2) in at least 10 States (or nine and the District of Columbia) shall be considered a legally qualified candidate for election in all States, territories and the District of Columbia for purposes of this Act.

(3) A person seeking nomination to any public office except that of President or Vice President of the United States, by means of a convention, caucus or similar procedure, shall be considered a legally qualified candidate if, in addition to meeting the requirements set forth in paragraph (q)(1) of this section, that person makes a substantial showing that he or she is a bona fide candidate for such nomination; except that no person shall be considered a legally qualified candidate for nomination by the means set forth in this paragraph prior to 90 days before the beginning of the convention, caucus or similar procedure in which he or she seeks nomination.

(4) A person seeking nomination for the office of President or Vice President of the United States shall, for the purposes of the Communications Act and the rules thereunder, be considered a legally qualified candidate only in those States or territories (or the District of Columbia) in which, in addition meeting the requirements set forth in paragraph (q)(1) of this section.

(i) He or she, or proposed delegates on his or her behalf, have qualified for the primary of Presidential preference ballot in that State, territory or the District of Columbia, or

(ii) He or she has made a substantial showing of bona fide candidacy for such nomination in that State, territory of the District of Columbia; except that such person meeting the requirements set forth in paragraph (q)(1) and (4) in at least 10 States (or nine and the District of Columbia) shall be considered a legally qualified candidate for nomination in all States, territories and the District of Columbia for purposes of the Act.

(5) The term "substantial showing" of bona fide candidacy as used in paragraph (q)(2), (3) and (4) of this section means evidence that the person claiming to be a candidate has engaged to a substantial degree in activities commonly associated with political campaigning. Such activities normally would include making campaign speeches, distributing campaign literature, issuing press releases, maintaining a campaign headquarters (even though the headquarters in some instances might be the residence of the candidate or his campaign manager). Not all of the listed activities are necessarily required in each case to demonstrate a substantial showing, and there may be activities not listed herein which would contribute to such a showing.

(r) *Class I cable television channel.* A signaling path provided by a cable television system to relay to subscriber terminals television broadcast programs that are received off-the-air or are obtained by microwave or by direct connection to a television broadcast station.

(s) *Class II cable television channel.* A signaling path provided by a cable television system to deliver to subscriber terminals television signals that are intended for reception by a television broadcast receiver without the use of an auxilliary decoding device and which signals are not involved in a broadcast transmission path.

(t) *Class III cable television channel.* A signaling path provided by a cable television system to deliver to subscriber terminals signals that are intended for reception by equipment other than a television broadcast receiver or by a television broadcast receiver only when used with auxiliary decoding equipment.

(u) *Class IV cable television channel.* A signaling path provided by a cable television system to transmit signals of any type from a subscriber terminal to

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another point in the cable television system.

(v) *Subscriber terminal.* The cable television system terminal to which a subscriber's equipment is connected. Separate terminals may be provided for delivery of signals of various classes.

NOTE: Terminal devices interconnected to subscriber terminals of a cable system shall comply with subpart H of part 15.

(w) *System noise.* That combination of undesired and fluctuating disturbances within a cable television channel that degrades the transmission of the desired signal and that is due to modulation processes or thermal or other noise-producing effects, but does not include hum and other undesired signals of discrete frequency. System noise is specified in terms of its rms voltage or its mean power level as measured in the 4 MHz bandwidth between 1.25 and 5.25 MHz above the lower channel boundary of a cable television channel.

(x) *Terminal isolation.* The attenuation, at any subscriber terminal, between that terminal and any other subscriber terminal in the cable television system.

(y) *Visual signal level.* The rms voltage produced by the visual signal during the transmission of synchronizing pulses.

(z) *Affiliate.* When used in relation to any person, another person who owns or controls, is owned or controlled by, or is under common ownership or control with, such person.

(aa) *Person.* An individual, partnership, association, joint stock company, trust, corporation, or governmental entity.

(bb) *Significant interest.* A cognizable interest for attributing interests in broadcast, cable, and newspaper properties pursuant to §§ 73.3555, 73.3615, and 76.501.

(cc) *Cable system operator.* Any person or group of persons (1) who provides cable service over a cable system and directly or through one or more affiliates owns a significant interest in such cable system; or (2) who otherwise controls or is responsible for, through any arrangement, the management and operation of such a cable system.

(dd) *System community unit: Community unit.* A cable television system, or portion of a cable television system, that operates or will operate within a separate and distinct community or municipal entity (including unincorporated communities within unincorporated areas and including single, discrete unincorporated areas).

(ee) *Subscribers.* A member of the general public who receives broadcast programming distributed by a cable television system and does not further distribute it.

(ff) *Cable service.* The one-way transmission to subscribers of video programming, or other programming service; and, subscriber interaction, if any, which is required for the selection of such video programming or other programming service. For the purposes of this definition, "video programming" is programming provided by, or generally considered comparable to programming provided by, a television broadcast station; and, "other programming service" is information that a cable operator makes available to all subscribers generally.

(gg) *Basic cable service.* For purposes of regulating the rates for the provision of basic cable service in circumstances in which a cable system is not subject to effective competition, basic cable service is any service tier which includes the retransmission of any broadcast television signals in the following categories:

(1) For communities located outside all major and smaller television markets (as defined in this section):

(i) Television broadcast stations within whose Grade B contours the community of the community unit is located, in whole or in part;

(ii) Television translator stations with 100 watts or higher power serving the community of the community unit and for community units that commence operations or expand channel capacity after March 30, 1972, noncommercial educational translator stations with 5 watts or higher power serving the community of the community unit;

(iii) Noncommercial educational television broadcast stations within whose specified zone the community of the community unit is located, in whole or in part;

(iv) Commercial television broadcast stations that are significantly viewed in the community of the community unit. See § 76.54.

(2) For communities in smaller television markets (as defined in this section):

(i) Television broadcast stations within whose specified zone the community of the community unit is located, in whole or in part;

(ii) Noncommercial educational television broadcast stations within whose Grade B contours the community of the community unit is located, in whole or in part;

(iii) Commercial television broadcast stations licensed to communities in other smaller television markets, within whose Grade B contours the community of the community unit is located, in whole or in part;

(iv) Television broadcast stations licensed to other communities which are generally considered to be part of the same smaller television market (Example: Burlington, VT-Plattsburgh, NY, television market);

(v) Television translator stations with 100 watts or higher power serving the community of the community unit and, for community units that commence operations or expand channel capacity after March 30, 1972, noncommercial educational translator stations with 5 watts or higher power serving the community of the community unit;

(vi) Commercial television broadcast stations that are significantly viewed in the community unit. See § 76.54.

(3) For communities in major television markets (as defined in this section) and in communities located both wholly or partially within both major and smaller television markets:

(i) Television broadcast stations within whose specified zone the community of the community unit is located, in whole or in part;

(ii) Noncommercial educational television broadcast stations within whose Grade B contours the community of the community unit is located, in whole or in part;

(iii) Television translator stations with 100 watts or higher power serving the community of the community unit and, for those community units that commence operations or expand channel capacity after March 30, 1972, noncommercial educational translator stations with 5 watts or higher power serving the community of the community unit;

(iv) Television broadcast stations licensed to other designated communities of the same major television market (Example: Cincinnati, Ohio-Newport, Ky., television market);

(v) Commercial television broadcast stations that are significantly viewed in the community of the community unit. See §76.54.

(4) In the absence of at least three signals in one of the above categories, any unaltered broadcast television signals.

(hh) *Input selector switch.* Any device that enables a viewer to select between cable service and off-the-air television signals. Such a device may be more sophisticated than a mere two-sided switch, may utilize other cable interface equipment, and may be built into consumer television receivers.

(ii) A "syndicated program" is any program sold, licensed, distributed or offered to television station licensees in more than one market within the United States other than as network programming as defined in § 76.5(o).

[37 FR 3278, Feb. 12, 1972]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 76.5, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 76.7 Special relief.

(a) On petition by a cable television system operator, a franchising authority, an applicant, permittee, or licensee of a television broadcast, translator, or microwave relay station, or by any other interested person, the Commission may waive any provision of the rules relating to cable television systems, impose additional or different requirements, or issue a ruling on a complaint or disputed question.

(b) The petition may be submitted informally, by letter, but shall be accompanied by a certificate of service on any cable television system operator, franchising authority, station licensee, permittee, or applicant, or other interested person who may be directly affected if the relief requested in the petition should be granted.

(c)(1) The petition shall state the relief requested and may contain alternative requests. It shall state fully and precisely all pertinent facts and considerations relied on to demonstrate the need for the relief requested and to support a determination that a grant of such relief would serve the public interest. Factual allegations shall be supported by affidavit of a person or persons with actual knowledge of the facts, and exhibits shall be verified by the person who prepares them.

(2) A petition for a ruling on a complaint or disputed question shall set forth all steps taken by the parties to resolve the problem, except where the only relief sought is a clarification or interpretation of the rules.

(3) An original and two (2) copies of the petition and all subsequent pleadings shall be filed. Special relief petitions requiring fees as set forth at Part 1, Subpart G of this chapter must be filed in accordance with § 0.401(b) of the rules.

(d) Interested persons may submit comments or opposition to the petition within thirty (30) days after it has been filed. For good cause shown in the petition, the Commission may, by letter or telegram to known interested persons, specify a shorter time for such submissions. Comments or oppositions shall be served on petitioner and on all persons listed in petitioner's certificate of service, and shall contain a detailed full showing, supported by affidavit, of any facts or considerations relied on.

(e) The petitioner may file a reply to the comments or oppositions within twenty (20) days after their submission, which shall be served on all persons who have filed pleadings and shall also contain a detailed full showing, supported by affidavit, of any additional facts or considerations relied on. For good cause shown, the Commission may specify a shorter time for the filing of reply comments.

(f) The Commission, after consideration of the pleadings, may determine whether the public interest would be served by the grant, in whole or in part, or denial of the request, or may issue a ruling on the complaint or dispute. The Commission may specify other procedures, such as oral argument, evidentiary hearing, or further written submissions directed to particular aspects, as it deems appropriate. In the event that an evidentiary hearing is required, the Commission will determine, on the basis of the pleadings and such other procedures as it may specify, whether temporary relief should be afforded any party pending the hearing and the nature of any such temporary relief.

(g) On a finding that the public interest so requires, the Commission may determine that a system community unit operating or proposing to operate in a community located outside of the 48 contiguous states shall comply with provisions of subparts D, F, and G of this part in addition to the provisions thereof otherwise applicable.

NOTE: Each party filing a petition, comments, opposition or other pleading pursuant to § 76.7 is responsible for the continuing accuracy and completeness of all information in such document. The provisions of § 1.65 are wholly applicable to pleadings involving § 76.7, except that where specific provisions of the latter conflict with the former, the specific provisions of § 76.7 are controlling, e.g., where requirements for service on specified parties of certain information may vary.

[37 FR 3278, Feb. 12, 1972, as amended at 37 FR 13864, July 14, 1972; 39 FR 6707, Feb. 22, 1974; 40 FR 54794, Nov. 26, 1975; 42 FR 19345, Apr. 13, 1977; 43 FR 49008, Oct. 20, 1978; 45 FR 60299, Sept. 11, 1980; 51 FR 44608, Dec. 11, 1986; 52 FR 10231, Mar. 31, 1987]

§ 76.8 Dismissal of special relief petitions.

(a) A petition for special relief may, upon request of the petitioner, be dismissed without prejudice as a matter of right prior to the adoption date of any final action taken by the Commission with respect to the petition. A petitioner's request for the return of a petition will be regarded as a request for dismissal.

(b) Failure to prosecute a petition, or failure to respond to official correspondence or request for additional information, will be cause for dismissal. Such dismissal will be without prejudice if it occurs prior to the adoption date of any final action taken by the Commission with respect to the petition.

[40 FR 12797, Mar. 21, 1975]

§ 76.9 Order to show cause; forfeiture proceeding.

(a) Upon petition by any interested person, the Commission may:

(1) Issue an order requiring a cable television operator to show cause why it should not be directed to cease and desist from violating the Commission's rules;

(2) Initiate a forfeiture proceeding against a cable television operator for violation of the Commission's Rules.

(b) The petition may be submitted informally, by letter, but shall be accompanied by a certificate of service on any interested person who may be directly affected if an order to show cause is issued or a forfeiture proceeding initiated. An original and two copies of the petition and all subsequent pleadings should be filed.

(c) The petition shall state fully and precisely all pertinent facts and considerations relied on to support a determination that issuance of an order to show cause or initiation of a forfeiture proceeding would be in the public interest. Factual allegations shall be supported by affidavit of a person or persons with actual knowledge of the facts, and exhibits shall be verified by the person who prepares them.

(d) Interested persons may submit comments or oppositions to the petition within thirty (30) days after it has been filed. For good cause shown in the petition, the Commission may, by letter or telegram to known interested persons, specify a shorter time for such submissions. Comments or oppositions shall be served on petitioner and on all persons listed in petitioner's certificate of service, and shall contain a detailed full showing supported by affidavit, of any facts or circumstances relied on.

(e) The petitioner may file a reply to the comments or oppositions within twenty (20) days after the time for filing such comments or oppositions has ended. A reply shall be served on all persons who have filed pleadings and shall also contain a detailed full showing, supported by affidavit, of any additional facts or considerations relied on. For good cause shown, the Commission may specify a shorter time for the filing of reply comments.

(f) The Commission, after consideration of the pleadings, shall determine whether the public interest requires the issuance of an order to show cause or the initiation of a forfeiture proceeding.

NOTE 1: After issuance of an order to show cause, the rules of procedure in title 47, part 1, subpart A, §§ 1.91-1.95 shall apply.

NOTE 2: Nothing in this section is intended to prevent the Commission from initiating show cause or forfeiture proceedings on its own motion: *Provided, however,* That show cause proceedings and forfeiture proceedings pursuant to § 1.80(g) of the rules will not be initiated by such motion until the affected parties are given an opportunity to respond to the Commission's charges.

NOTE 3: Forfeiture proceedings are generally nonhearing matters conducted pursuant to the provisions of § 1.80(f) of the rules (Notice of Apparent Liability). Petitioners who contend that the alternative hearing procedures of § 1.80(g) of the rules should be followed in a particular case must support this contention with a specific showing of the facts and considerations relied on.

[42 FR 56507, Oct. 26, 1977, as amended at 44 FR 55575, Sept. 27, 1979]

§ 76.10 Channel access enforcement.

(a) Any person aggrieved by the failure or refusal of a cable operator to make commercial channel capacity available in accordance with the provisions of Title VI of the Communications Act may bring an action in the district court of the United States for the Judicial district in which the cable system is located to compel that such capacity be made available.

(b) Any person aggrieved by the failure or refusal of a cable operator to make commercial channel capacity available in accordance with the provisions of Title VI of the Communications Act may petition the Commission for relief upon a showing of three prior adjudicated violations. Records of previous adjudications resulting in a court determination that the operator has violated the provisions of the Communications Act concerning commerical channel access shall be considered as sufficient for the showing necessary under this section.

(c) Petitions filed with the Commission in response to paragraph (b) shall be made in accordance with the provisions and procedures set forth in § 76.7 for petitions for special relief.

[50 FR 18661, May 2, 1985]

§ 76.11 Lockbox enforcement.

Any party aggrieved by the failure or refusal of a cable operator to provided a lockbox as provided for in Title VI of the Communications Act may petition the Commission for relief in accordance with the provisions and procedures set forth in § 76.7 for petitions for special relief.

[50 FR 18661, May 2, 1985]

Subpart B—Registration Statements

§ 76.12 Registration statement required.

A system community unit shall be authorized to commence operation only after filing with the Commission the following information:

(a) The legal name of the operator, entity identification or social security number, and whether the operator is an individual, private association, partnership, or corporation. If the operator is a partnership, the legal name of the partner responsible for communications with the Commission shall be supplied;

(b) The assumed name (if any) used for doing business in the community;

(c) The mail address, including ZIP code, and the telephone number to which all communications are to be directed;

(d) The date the system provided service to 50 subscribers;

(e) The name of the community or area served and the county in which it is located;

(f) The television broadcast signals to be carried which previously have not been certified or registered.

(Secs. 2, 3, 4, 5, 301, 303, 307, 308, 309, 315, 317, 48 Stat. 1064—1066, 1068, 1081—1085, 1088, 1089, as amended; 47 U.S.C. 152, 153, 154, 155, 301, 303, 307, 308, 309, 315, 317)

[37 FR 3278, Feb. 12, 1972, as amended at 45 FR 52154, Aug. 6, 1980; 49 FR 27154, July 2, 1984; 50 FR 40855, Oct. 7, 1985]

§ 76.14 Who may sign registration statements.

(a) Registration statements shall be personally signed by the operator; by one of the partners, if the operator is a partnership; by an officer, if the operator is a corporation; by a member who is an officer, if the operator is an unincorporated association; or by any duly authorized employee of the operator.

(b) Registration statements may be signed by the operator's attorney in case of the operator's physical disability or of his absence from the United States. The attorney shall in that event separately set forth the reasons why the registration statement was not signed by the operator. In addition, if any matter is stated on the basis of the attorney's belief only (rather than his knowledge), he shall separately set forth his reasons for believing that such statements are true.

[43 FR 49008, Oct. 20, 1978]

§ 76.17 Public notice.

The Commission will give public notice of the filing of registration statements.

[43 FR 49008, Oct. 20, 1978]

§ 76.29 Special temporary authority.

(a) In circumstances requiring the temporary use of community units for operations not authorized by the Commission's rules, a cable television system may request special temporary authority to operate. The Commission may grant special temporary authority, upon a finding that the public interest would be served thereby, for a period not to exceed ninety (90) days, and may extend such authority, upon a like finding, for one additional period, not to exceed ninety (90) days.

(b) Requests for special temporary authority may be submitted informally, by letter, and shall contain the following:

(1) Name and address of the applicant cable system.

(2) Community in which the community unit is located.

(3) Type of operation to be conducted.

(4) Date of commencement of proposed operations.

(5) Duration of time for which temporary authority is required.

(6) All pertinent facts and considerations relied on to demonstrate the need for special temporary authority and to support a determination that a grant of such authority would serve the public interest.

(7) A certificate of service on all interested parties.

(c) A request for special temporary authority shall be filed at least ten (10) days prior to the date of commencement of the proposed operations, or shall be accompanied by a statement of reasons for the delay in submitting such request.

(d) A grant of special temporary authority may be rescinded by the Commission at any time upon a finding of facts which warrant such action.

[39 FR 35166, Sept. 30, 1974; 42 FR 19346, Apr. 13, 1977, as amended at 43 FR 49008, Oct. 20, 1978]

Subpart C—Federal-State/Local Regulatory Relationships

§ 76.33 Standards for rate regulation.

(a) Effective October 29, 1988, a franchising authority may regulate the rates of a cable system subject to the following conditions (cable systems that were subject to rate regulation prior to this date will remain subject to that regulation pending demonstration that they may not be regulated pursuant to this section):

(1) Only basic cable service as defined in § 76.5(gg) may be regulated;

(2) Only cable systems that are not subject to effective competition may be rate regulated. A cable system will be determined to be subject to effective competition whenever 100 percent of the cable community receives service from at least three unduplicated broadcast television signals. It is not necessary that the same three signals provide service to the entire community. Signals shall be counted on the basis of their predicted Grade B contour (as defined in § 73.683 of the rules) or whether they are significantly viewed within the cable community, as defined in § 76.54(b) and (c) of the rules. A signal that is significantly viewed shall be considered to be available to 100 percent of the cable community. A translator station authorized to serve the cable community is to be counted in the same manner as a full-service station, except that its coverage area shall be based on its protected contour as specified in § 74.707 of the rules, provided that the translator is not used to retransmit a station already providing a Grade B contour or significantly viewed signal within the cable community.

(3) The Commission may grant waivers of this standard where the filing party demonstrates with engineering studies in accordance with § 73.686 of the Commission's rules or by other showings that such Grade B level signals are (or are not) in fact available within the community. In performing the engineering studies noted above, cluster measurements, as provided in § 73.686(b)(2)(viii), may be taken in place of mobile runs as provided in § 73.686(b)(2)(v). Responsibility for the cost of engineering studies undertaken to refute the predicted availability of Grade B service will fall on the party that loses in the waiver proceeding. Any party intending to obtain this study must first inform the other party and provide it an opportunity to negotiate a resolution. Parties not taking this first step will be assigned full responsibility for the study costs.

(4) A cable system, once determined to be subject to effective competition after the effective date of this section, shall not be subject to regulation for one year after any change in market conditions which would cause it to be determined not to be subject to effective competition.

(b) In establishing any rate for the provision of basic cable service by cable systems subject to paragraph (a) of this section, the franchising authority shall:

(1) Give formal notice to the public;

(2) Provide an opportunity for interested parties to make their views known, at least through written submissions; and,

(3) Make a formal statement (including summary explanation) when a decision on a rate matter is made.

(c) Any party may petition the Commission for relief of the provisions in this section in accordance with the provisions and procedures set forth in § 76.7 for petitions for special relief.

[53 FR 17051, May 13, 1988, as amended at 54 FR 41843, Oct. 12, 1989]

Subpart D—Carriage of Television Broadcast Signals

§ 76.51 Major television markets.

For purposes of the cable television rules, the following is a list of the major television markets and their designated communities:

(a) First 50 major television markets:

(1) New York, New York-Linden-Paterson-Newark, New Jersey.

(2) Los Angeles-San Bernardino-Corona-Fontana, Calif.

(3) Chicago, Ill.

(4) Philadelphia, Pa.-Burlington, N.J.

(5) Detroit, Mich.

(6) Boston-Cambridge-Worcester, Mass.

(7) San Francisco-Oakland-San Jose, Calif.

(8) Cleveland-Lorain-Akron, Ohio.

(9) Washington, DC.

(10) Pittsburgh, Pa.

(11) St. Louis, Mo.

(12) Dallas-Fort Worth, Tex.

(13) Minneapolis-St. Paul, Minn.

(14) Baltimore, Md.

(15) Houston, Tex.

(16) Indianapolis-Bloomington, Ind.

(17) Cincinnati, Ohio-Newport, Ky.

(18) Atlanta, Ga.

(19) Hartford-New Haven-New Britain-Waterbury, Conn.

(20) Seattle-Tacoma, Wash.

(21) Miami, Fla.

(22) Kansas City, Mo.

(23) Milwaukee, Wis.

(24) Buffalo, N.Y.

(25) Sacramento-Stockton-Modesto, Calif.

(26) Memphis, Tenn.

(27) Columbus, Ohio.

(28) Tampa-St. Petersburg, Fla.

(29) Portland, Oreg.

(30) Nashville, Tenn.

(31) New Orleans, La.

(32) Denver, Colo.

(33) Providence, R.I.-New Bedford, Mass.

(34) Albany-Schenectady-Troy, N.Y.

(35) Syracuse, N.Y.

(36) Charleston-Huntington, W. Va.

(37) Kalamazoo-Grand Rapids-Battle Creek, Mich.

(38) Louisville, Ky.

(39) Oklahoma City, Okla.

(40) Birmingham, Ala.

(41) Dayton-Kettering, Ohio.

(42) Charlotte, N.C.

(43) Phoenix-Mesa, Ariz.

(44) Norfolk-Newport News-Portsmouth-Hampton, Va.

(45) San Antonio, Tex.

(46) Greenville-Spartanburg-Anderson, S.C.-Asheville, N.C.

(47) Greensboro-High Point-Winston Salem, N.C.

(48) Salt Lake City, Utah.

(49) Wilkes Barre-Scranton, Pa.

(50) Little Rock, Ark.

(b) Second 50 major television markets:

(51) San Diego, Calif.

(52) Toledo, Ohio.

(53) Omaha, Nebr.

(54) Tulsa, Okla.

(55) Orlando-Daytona Beach-Melbourne-Cocoa, Florida.

(56) Rochester, N.Y.

(57) Harrisburg-Lancaster-York, Pa.

(58) Texarkana, Tex.-Shreveport, La.

(59) Mobile, Ala.-Pensacola, Fla.

(60) Davenport, Iowa-Rock Island-Moline, Ill.

(61) Flint-Bay City-Saginaw, Mich.

(62) Green Bay, Wis.

(63) Richmond-Petersburg, Va.

(64) Springfield-Decatur-Champaign, Illinois.

(65) Cedar Rapids-Waterloo, Iowa.

(66) Des Moines-Ames, Iowa.

(67) Wichita-Hutchinson, Kans.

(68) Jacksonville, Fla.

(69) Cape Girardeau, Mo.-Paducah, Ky.-Harrisburg, Ill.

(70) Roanoke-Lynchburg, Va.

(71) Knoxville, Tenn.

(72) Fresno-Visalia-Hanford-Clovis, California.

(73) Raleigh-Durham, N.C.

(74) Johnstown-Altoona, Pa.

(75) Portland-Poland Spring, Maine.

(76) Spokane, Wash.

(77) Jackson, Miss.

(78) Chattanooga, Tenn.

(79) Youngstown, Ohio.

(80) South Bend-Elkhart, Ind.

(81) Albuquerque, N. Mex.

(82) Fort Wayne-Roanoke, Ind.

(83) Peoria, Ill.

(84) Greenville-Washington-New Bern, N.C.

(85) Sioux Falls-Mitchell, S. Dak.

(86) Evansville, Ind.

(87) Baton Rouge, La.

(88) Beaumont-Port Arthur, Tex.

(89) Duluth, Minn.-Superior, Minn.

(90) Wheeling, W. Va.-Steubenville, Ohio.

(91) Lincoln-Hastings-Kearney, Nebr.

(92) Lansing-Onondaga, Mich.

(93) Madison, Wis.

(94) Columbus, Ga.

(95) Amarillo, Tex.

(96) Huntsville-Decatur, Ala.

(97) Rockford-Freeport, Ill.

(98) Fargo-Valley City, N.D.

(99) Monroe, La.-El Dorado, Ark.

(100) Columbia, S.C.

[37 FR 3278, Feb. 12, 1972, as amended at 37 FR 13866, July 14, 1972; 39 FR 24373, July 2, 1974; 39 FR 27572, July 30, 1974; 39 FR 37988, Oct. 25, 1974]

§ 76.53 Reference points.

The following list of reference points shall be used to identify the boundaries of the major and smaller television markets (defined in § 76.5). Where a community's reference point is not given, the geographic coordinates of the main post office in the community shall be used.

State and community	Latitude	Longitude
Alabama:		
Anniston	33°39′49″	85°49′47″
Birmingham	33°31′01″	86°48′36″
Decatur	34°36′35″	86°58′45″
Demopolis	32°30′56″	87°50′07″
Dothan	31°13′27″	85°23′35″
Dozier	31°29′30″	86°21′59″
Florence	34°48′05″	87°40′31″
Huntsville	34°44′18″	86°35′19″
Louisville	31°47′00″	85°33′09″
Mobile	30°41′36″	88°02′33″
Montgomery	32°22′33″	86°18′31″
Mount Cheaha State Park	32°29′06″	85°48′30″
Selma	24°24′26″	87°01′15″
Tuscaloosa	33°12′05″	87°33′44″
Alaska:		
Anchorage	61°13′09″	149°53′29″
College	64°51′22″	147°48′38″
Fairbanks	64°50′35″	147°41′51″
Juneau	58°18′06″	134°25′09″
Sitka	57°02′58″	135°20′12″
Arizona:		
Flagstaff	35°11′54″	111°39′02″
Mesa	33°24′54″	111°49′41″
Nogales	31°20′14″	110°56′12″
Phoenix	33°27′12″	112°04′28″
Tucson	32°13′15″	110°58′08″
Yuma	32°43′16″	114°37′01″
Arkansas:		
El Dorado	33°12′39″	92°39′40″
Fayetteville	36°03′41″	94°09′38″
Fort Smith	35°23′10″	94°25′36″
Jonesboro	35°50′14″	90°42′11″
Little Rock	34°44′42″	92°16′37″
California:		
Bakersfield	35°22′31″	119°01′16″
Chico	39°44′07″	121°49′57″
Concord	37°58′46″	122°01′51″
Corona	33°52′35″	117°33′56″
El Centro	32°47′25″	115°32′45″
Eureka	40°48′08″	124°09′46″
Fontana	34°05′45″	117°26′29″
Fresno	36°44′12″	119°47′11″
Guasti	34°03′48″	117°35′10″
Hanford	36°19′51″	119°38′48″
Los Angeles	34°03′15″	118°14′28″
Modesto	37°38′26″	120°59′44″
Monterey	36°35′44″	121°53′39″
Oakland	37°48′03″	122°15′54″
Palm Springs	33°49′22″	116°32′46″
Redding	40°34′57″	122°23′34″
Sacramento	38°34′57″	121°29′41″
Salinas	36°40′24″	121°39′25″
San Bernardino	34°06′30″	117°17′28″
San Diego	32°42′53″	117°09′21″
San Francisco	37°46′39″	122°24′40″
San Jose	37°20′16″	121°53′24″
San Luis Obispo	35°16′49″	120°39′34″
San Mateo	37°34′08″	122°19′16″
Santa Barbara	34°25′18″	119°41′55″
Santa Maria	34°57′02″	120°26′10″
Stockton	37°57′30″	121°17′16″
Tulare	36°12′31″	119°20′35″
Ventura	34°16′47″	119°17′22″
Visalia	36°19′46″	119°17′30″
Colorado:		
Colorado Springs	38°50′07″	104°49′16″
Denver	39°44′58″	104°59′22″
Durango	37°16′29″	107°52′25″
Grand Junction	39°04′06″	108°33′54″
Montrose	38°28′44″	107°52′31″
Pueblo	38°16′17″	104°36′33″
Sterling	40°37′29″	103°12′25″
Connecticut:		
Bridgeport	41°10′49″	73°11′22″
Hartford	41°46′12″	72°40′49″
New Britain	41°40′02″	72°47′08″
New Haven	41°18′25″	72°55′30″
Norwich	41°31′36″	72°04′31″
Waterbury	41°33′13″	73°02′31″
Delaware:		
Wilmington	39°44′46″	75°32′51″
District of Columbia:		
Washington	38°53′51″	77°00′33″
Florida:		
Clearwater	27°57′56″	82°47′51″
Daytona Beach	29°12′44″	81°01′10″
Fort Lauderdale	26°07′11″	80°08′34″
Fort Myers	26°38′42″	81°52′06″
Fort Pierce	27°26′48″	80°19′38″
Gainesville	29°38′56″	82°19′19″
Jacksonville	30°19′44″	81°39′42″
Largo	27°54′54″	82°47′32″
Leesburg	28°48′43″	81°52′30″
Melbourne	28°04′41″	80°36′29″
Miami	25°46′37″	80°11′32″
Ocala	29°11′34″	82°08′14″
Orlando	28°32′42″	81°22′38″
Panama City	30°09′24″	85°39′47″
Pensacola	30°24′51″	87°12′56″
St. Petersburg	27°46′18″	82°38′16″
Sarasota	27°20′05″	82°32′29″
Tallahassee	30°26′30″	84°16′50″
Tampa	27°56′58″	82°27′26″
West Palm Beach	26°42′36″	80°03′05″
Georgia:		
Albany	31°34′36″	84°09′22″
Athens	33°57′34″	83°22′39″
Atlanta	33°45′10″	84°23′37″
Augusta	33°28′20″	81°58′00″
Chatsworth	34°46′08″	84°46′10″
Cochran	32°23′18″	83°21′18″
Columbus	32°28′07″	84°59′24″
Dawson	31°46′33″	84°26′20″
Macon	32°50′12″	83°37′36″
Pelham	31°07′42″	84°09′02″
Savannah	32°04′42″	81°05′37″
Thomasville	30°50′25″	83°58′59″
Waycross	31°12′19″	82°21′47″
Wrens	33°12′21″	82°23′23″
Guam:		
Agana	13°28′23″	144°45′00″
Hawaii:		
Hilo	19°43′42″	155°05′30″
Honolulu	21°18′36″	157°51′48″

State and community	Latitude	Longitude
Wailuku	20°53'21"	156°30'27"
Idaho:		
Boise	43°37'07"	116°11'58"
Idaho Falls	43°29'39"	112°02'28"
Lewiston	46°25'05"	117°01'10"
Moscow	46°43'58"	116°59'54"
Pocatello	42°51'38"	112°27'01"
Twin Falls	42°33'25"	114°28'21"
Illinois:		
Aurora	41°45'22"	88°18'56"
Bloomington	40°28'58"	88°59'32"
Carbondale	37°43'38"	89°13'00"
Champaign	40°07'05"	88°14'48"
Chicago	41°52'28"	87°38'22"
Decatur	39°50'37"	88°57'11"
Elgin	42°02'14"	88°16'53"
Freeport	42°17'57"	89°37'07"
Harrisburg	37°44'20"	88°32'25"
Jacksonville	39°44'03"	90°13'44"
Joliet	41°31'37"	88°04'52"
La Salle	41°19'49"	89°05'44"
Moline	41°30'31"	90°30'49"
Mount Vernon	38°18'29"	88°54'26"
Olney	38°43'47"	88°05'00"
Peoria	40°41'42"	89°35'33"
Quincy	39°55'59"	91°24'12"
Rockford	42°16'07"	89°05'48"
Rock Island	41°30'40"	90°34'24"
Springfield	39°47'58"	89°38'51"
Urbana	40°06'41"	88°13'13"
Indiana:		
Bloomington	39°09'56"	86°31'52"
Elkhart	41°40'56"	85°58'15"
Evansville	37°58'20"	87°34'21"
Fort Wayne	41°04'21"	85°08'26"
Gary	41°35'59"	87°20'07"
Hammond	41°35'13"	87°27'43"
Indianapolis	39°46'07"	86°09'46"
Lafayette	40°25'11"	86°53'39"
Marion	40°33'17"	85°39'49"
Muncie	40°11'28"	85°23'16"
Richmond	39°49'49"	86°53'26"
Roanoke	40°57'50"	85°22'30"
St. John	41°27'00"	87°29'13"
South Bend	41°40'33"	86°15'01"
Terre Haute	39°28'03"	87°24'26"
Vincennes	38°40'52"	87°31'12"
Iowa:		
Ames	42°01'36"	93°36'44"
Cedar Rapids	41°58'48"	91°39'48"
Davenport	41°31'24"	90°34'21"
Des Moines	41°35'14"	93°37'00"
Dubuque	42°29'55"	90°40'08"
Fort Dodge	42°30'12"	94°11'05"
Iowa City	41°39'37"	91°31'52"
Mason City	43°09'15"	93°12'00"
Sioux City	42°29'46"	96°24'30"
Waterloo	42°29'40"	92°20'20"
Kansas:		
Ensign	37°38'48"	100°14'00"
Garden City	37°57'54"	100°52'20"
Goodland	39°20'53"	101°42'35"
Great Bend	38°22'04"	98°45'58"
Hays	38°52'16"	99°19'57"
Hutchinson	38°03'11"	97°55'20"
Pittsburg	37°24'50"	94°42'11"
Salina	38°50'36"	97°36'46"
Topeka	39°03'16"	95°40'23"
Wichita	37°41'30"	97°20'16"
Kentucky:		
Ashland	38°28'36"	82°38'23"
Bowling Green	36°59'41"	86°26'33"
Covington	39°05'00"	84°30'29"
Elizabethtown	38°41'38"	85°51'35"
Hazard	37°14'54"	83°11'31"
Lexington	38°02'50"	84°29'46"
Louisville	38°14'47"	85°45'49"
Madisonville	37°19'45"	87°29'54"
Morehead	38°10'53"	83°26'09"
Murray	36°36'35"	88°18'39"
Newport	39°05'28"	84°29'20"
Owensboro	37°46'27"	87°06'49"
Owenton	38°32'11"	84°50'16"
Paducah	37°05'13"	88°35'56"
Pikesville	37°28'49"	82°31'09"
Somerset	37°05'35"	84°36'17"
Louisiana:		
Alexandria	31°18'33"	92°26'47"
Baton Rouge	30°26'58"	91°11'00"
Houma	29°35'34"	90°43'09"
Lafayette	30°13'24"	92°01'06"
Lake Charles	30°13'45"	93°12'52"
Monroe	32°30'02"	92°06'55"
New Orleans	29°56'53"	90°04'10"
Shreveport	32°30'46"	93°44'58"
West Monroe	32°30'51"	92°08'13"
Maine:		
Augusta	44°18'53"	69°46'29"
Bangor	44°48'13"	68°46'18"
Calais	45°11'04"	67°16'43"
Orono	44°53'15"	68°40'12"
Poland Spring	44°01'42"	70°21'40"
Portland	43°39'33"	70°15'19"
Presque Isle	46°40'57"	68°00'52"
Maryland:		
Baltimore	39°17'26"	76°36'45"
Cumberland	39°39'01"	78°45'45"
Hagerstown	39°38'39"	77°43'15"
Salisbury	38°21'56"	75°36'36"
Massachusetts:		
Adams	42°37'30"	73°07'05"
Boston	42°21'24"	71°03'25"
Cambridge	42°21'58"	71°06'24"
Greenfield	42°35'15"	72°35'54"
New Bedford	41°38'13"	70°55'41"
Springfield	42°06'21"	72°35'32"
Worcester	42°15'37"	71°48'17"
Michigan:		
Allen Park	42°15'12"	83°12'57"
Battle Creek	42°18'58"	85°10'48"
Bay City	43°36'04"	83°53'15"
Cadillac	44°15'10"	85°23'52"
Cheboygan	45°38'36"	84°28'38"
Detroit	42°19'48"	83°02'57"
Escanaba	45°44'45"	87°03'18"
Flint	43°00'50"	83°41'33"
Grand Rapids	42°58'03"	85°40'13"
Jackson	42°14'43"	84°24'22"
Kalamazoo	42°17'29"	85°35'14"
Lansing	42°44'01"	84°33'15"
Marquette	46°32'37"	87°23'43"
Mount Pleasant	43°16'12"	84°46'31"
Muskegon	43°14'17"	86°15'02"
Onondaga	42°26'41"	84°33'43"
Saginaw	43°25'52"	83°56'05"
Sault Ste. Marie	46°29'58"	84°20'37"
Traverse City	44°45'47"	85°37'25"
University Center	43°33'31"	83°59'09"
Minnesota:		
Alexandria	45°53'06"	95°22'39"
Appleton	45°12'00"	96°01'02"
Austin	43°39'57"	92°58'20"
Duluth	46°46'56"	92°06'24"
Hibbing	47°25'43"	92°56'21"
Mankato	44°09'49"	94°00'09"
Minneapolis	44°58'57"	93°15'43"

State and community	Latitude	Longitude
Rochester	44°01′21″	92°28′03″
St. Cloud	45°33′35″	94°09′38″
St. Paul	44°56′50″	93°05′11″
Walker	47°05′57″	94°35′12″
Mississippi:		
Biloxi	30°23′43″	88°53′08″
Bude	31°27′46″	90°50′34″
Columbus	33°29′40″	88°25′33″
Greenwood	33°31′05″	90°10′55″
Gulfport	30°22′04″	89°05′36″
Jackson	32°17′56″	90°11′06″
Laurel	31°41′40″	89°07′48″
Meridian	32°21′57″	88°42′02″
Oxford	34°22′00″	89°31′07″
State College	33°27′18″	88°47′13″
Tupelo	34°15′26″	88°42′30″
Missouri:		
Cape Girardeau	37°18′29″	89°31′29″
Columbia	38°57′03″	92°19′46″
Hannibal	39°42′24″	91°22′45″
Jefferson City	38°34′40″	92°10′24″
Joplin	37°05′26″	94°30′50″
Kansas City	39°04′56″	94°35′20″
Kirksville	40°11′37″	92°34′58″
Poplar Bluff	36°45′20″	90°23′38″
St. Joseph	39°45′57″	94°51′02″
St. Louis	38°37′45″	90°12′22″
Sedalia	38°42′08″	93°13′26″
Springfield	37°13′03″	93°17′32″
Montana:		
Anaconda	46°07′40″	112°57′12″
Billings	45°47′00″	108°30′04″
Butte	46°01′06″	112°32′11″
Glendive	47°06′42″	104°43′02″
Great Falls	47°29′33″	111°18′23″
Helena	46°35′33″	112°02′24″
Kalispell	48°11′45″	114°18′44″
Miles City	46°24′34″	105°50′30″
Missoula	46°52′23″	113°59′29″
Nebraska:		
Albion	41°41′23″	97°59′53″
Alliance	42°06′04″	102°52′08″
Bassett	42°35′00″	99°32′10″
Grand Island	40°55′33″	98°20′23″
Hastings	40°35′21″	98°23′20″
Hayes Center	40°30′36″	101°01′18″
Hay Springs	42°41′03″	102°41′22″
Kearney	40°41′58″	99°04′53″
Lexington	40°46′30″	99°44′41″
Lincoln	40°48′59″	96°42′15″
McCook	40°12′02″	100°37′32″
Merriman	42°55′07″	101°42′02″
Norfolk	42°01′56″	97°24′42″
North Platte	41°08′14″	100°45′43″
Omaha	41°15′42″	95°56′14″
Scottsbluff	41°51′40″	103°39′00″
Superior	40°01′12″	98°04′00″
Nevada:		
Elko	40°50′00″	115°45′41″
Henderson	36°02′06″	114°58′57″
Las Vegas	36°10′20″	115°08′37″
Reno	39°31′27″	119°48′40″
New Hampshire:		
Berlin	44°28′20″	71°10′43″
Durham	43°08′02″	70°55′35″
Hanover	43°42′03″	72°17′24″
Keene	42°56′02″	72°16′44″
Lebanon	43°38′34″	72°15′12″
Littleton	44°18′22″	71°46′13″
Manchester	42°59′28″	71°27′41″
New Jersey:		
Atlantic City	39°21′32″	74°25′53″
Burlington	40°04′21″	74°51′47″
Camden	39°56′45″	75°07′20″
Glen Ridge	40°48′16″	74°12′14″
Linden	40°37′57″	74°15′22″
Newark	40°44′14″	74°10′19″
New Brunswick	40°29′38″	74°26′49″
Paterson	40°54′51″	74°09′51″
Trenton	40°13′16″	74°45′28″
Vineland	39°29′13″	75°01′17″
Wildwood	38°59′18″	74°48′43″
New Mexico		
Albuquerque	35°05′01″	106°39′05″
Carlsbad	32°25′09″	104°13′47″
Clovis	34°24′11″	103°12′08″
Portales	34°10′58″	103°20′10″
Roswell	33°23′47″	104°31′26″
New York		
Albany	42°39′01″	73°45′01″
Binghamton	42°06′03″	75°54′47″
Buffalo	42°52′52″	78°52′21″
Carthage	43°58′50″	75°36′26″
Elmira	42°05′26″	76°48′22″
Garden City	40°43′26″	73°38′03″
Ithaca	42°26′33″	76°29′42″
Jamestown	42°05′45″	79°14′40″
New York	40°45′06″	73°59′39″
North Pole	44°23′59″	73°51′00″
Norwood	44°45′00″	75°59′39″
Oneonta	42°27′21″	75°03′42″
Patchogue	40°45′56″	73°00′42″
Plattsburgh	44°42′03″	73°27′07″
Riverhead	40°55′06″	72°39′51″
Rochester	43°09′41″	77°36′21″
Schenectady	42°48′52″	73°56′24″
Syracuse	43°03′04″	76°09′14″
Utica	43°06′12″	75°13′33″
Watertown	43°58′30″	75°54′48″
North Carolina:		
Asheville	35°35′42″	82°33′26″
Chapel Hill	35°54′51″	79°03′11″
Charlotte	35°13′44″	80°50′45″
Columbia	35°55′06″	76°15′04″
Concord	35°24′29″	80°34′45″
Durham	35°59′48″	78°54′00″
Fayetteville	35°03′12″	78°52′54″
Greensboro	36°04′17″	79°47′25″
Greenville	35°36′49″	77°22′22″
Hickory	35°43′54″	81°20′20″
High Point	35°57′14″	80°00′15″
Jacksonville	34°45′00″	77°25′54″
Linville	36°04′06″	81°52′16″
New Bern	35°06′33″	77°02′23″
Raleigh	35°46′38″	78°38′21″
Washington	35°32′35″	77°03′16″
Wilmington	34°14′14″	77°56′58″
Winston-Salem	36°05′52″	80°14′42″
North Dakota		
Bismark	46°48′23″	100°47′17″
Devils Lake	48°06′42″	98°51′29″
Dickinson	46°52′55″	102°47′06″
Fargo	46°52′30″	96°47′18″
Minot	48°14′09″	101°17′38″
Pembina	48°58′00″	97°14′37″
Valley City	46°55′31″	98°00′04″
Williston	48°08′47″	103°36′59″
Ohio:		
Akron	41°05′00″	81°30′44″
Athens	39°19′38″	82°06′09″
Bowling Green	41°22′37″	83°39′03″
Canton	40°47′50″	81°22′37″
Cincinnati	39°06′07″	84°30′35″
Cleveland	41°29′51″	81°41′50″
Columbus	39°57′47″	83°00′17″
Dayton	39°45′32″	84°11′43″

State and community	Latitude	Longitude
Kettering	39°41'22"	84°10'07"
Lima	40°44'29"	84°06'34"
Lorain	41°27'48"	82°10'23"
Marion	40°35'14"	83°07'36"
Newark	40°03'35"	82°24'15"
Oxford	39°30'28"	84°44'26"
Portsmouth	38°44'06"	82°59'39"
Springfield	39°55'38"	83°48'29"
Steubenville	40°21'42"	80°36'53"
Toledo	41°39'14"	83°32'39"
Youngstown	41°05'57"	80°39'02"
Zanesville	39°56'59"	82°00'56"
Oklahoma:		
Ada	34°46'24"	96°40'36"
Ardmore	34°10'18"	97°07'50"
Lawton	34°36'27"	98°23'41"
Oklahoma City	35°28'26"	97°31'04"
Sayre	35°17'34"	99°38'23"
Tulsa	36°09'12"	95°59'34"
Oregon:		
Coos Bay	43°22'02"	124°13'09"
Corvallis	44°34'10"	123°16'12"
Eugene	44°03'16"	123°05'30"
Klamath Falls	42°13'32"	121°46'32"
La Grande	45°19'47"	118°05'45"
Medford	42°19'33"	122°52'31"
Portland	45°31'06"	122°40'35"
Roseburg	43°12'34"	123°20'26"
Salem	44°56'21"	123°01'59"
Pennsylvania:		
Allentown	40°36'11"	75°28'06"
Altoona	40°30'55"	78°24'03"
Bethlehem	40°37'57"	75°21'36"
Clearfield	41°01'20"	78°26'10"
Erie	42°07'15"	80°04'57"
Harrisburg	40°15'43"	76°52'59"
Hershey	40°17'04"	76°39'01"
Johnstown	40°19'35"	78°55'03"
Lancaster	40°02'25"	76°18'29"
Philadelphia	39°56'58"	75°09'21"
Pittsburgh	40°26'19"	80°00'00"
Reading	40°20'09"	75°55'40"
Scranton	41°24'32"	75°39'46"
Wilkes-Barre	41°14'32"	75°53'17"
York	39°57'35"	76°43'36"
Puerto Rico:		
Aguadilla	18°25'53"	67°09'18"
Arecibo	18°28'26"	66°43'39"
Caguas	18°13'59"	66°02'06"
Fajardo	18°19'35"	65°39'21"
Mayaguez	18°12'16"	67°08'36"
Ponce	18°00'51"	66°36'58"
San Juan	18°26'55"	66°03'55"
Rhode Island:		
Providence	41°49'32"	71°24'41"
South Carolina:		
Allendale	33°00'30"	81°18'26"
Anderson	34°30'06"	82°38'54"
Charleston	32°46'35"	79°55'53"
Columbia	34°00'02"	81°02'00"
Florence	34°11'49"	79°46'06"
Greenville	34°50'50"	82°24'01"
Spartanburg	34°57'03"	81°56'06"
South Dakota:		
Aberdeen	45°27'31"	98°29'03"
Brookings	44°18'38"	96°47'53"
Florence	45°03'14"	97°19'35"
Lead	44°21'07"	103°46'03"
Mitchell	43°42'48"	98°01'36"
Pierre	44°22'06"	100°20'57"
Rapid City	44°04'52"	103°13'11"
Reliance	43°52'45"	99°36'18"
Sioux Falls	43°32'35"	96°43'35"
Vermillion	42°46'52"	96°55'36"
Tennessee:		
Chattanooga	35°02'41"	85°18'32"
Jackson	35°36'48"	88°48'15"
Johnson City	36°19'04"	82°20'56"
Kingsport	36°32'57"	82°33'44"
Knoxville	35°57'39"	83°55'07"
Lexington	35°38'58"	88°23'31"
Memphis	35°08'46"	90°03'13"
Nashville	36°09'33"	86°46'55"
Sneedville	36°31'46"	83°13'04"
Texas:		
Abilene	32°27'05"	99°43'51"
Amarillo	35°12'27"	101°50'04"
Austin	30°16'09"	97°44'37"
Beaumont	30°05'20"	94°06'09"
Belton	31°03'31"	97°27'30"
Big Spring	32°15'03"	101°28'38"
Bryan	30°38'48"	96°21'31"
College Station	30°37'05"	96°20'41"
Corpus Christi	27°47'51"	97°23'45"
Dallas	32°47'09"	96°47'37"
El Paso	31°45'36"	106°29'11"
Fort Worth	32°44'55"	97°19'44"
Galveston	29°18'10"	94°47'43"
Harlingen	26°11'29"	97°41'35"
Houston	29°45'26"	95°21'37"
Laredo	27°30'22"	99°30'30"
Longview	32°28'24"	94°43'45"
Lubbock	33°35'05"	101°50'33"
Lufkin	31°20'14"	94°43'21"
Midland	31°59'54"	102°04'31"
Monahans	31°35'16"	102°53'26"
Nacogdoches	31°36'13"	94°39'20"
Odessa	31°50'49"	102°22'01"
Port Arthur	29°52'09"	93°56'01"
Richardson	32°57'06"	96°44'05"
Rosenberg	29°33'30"	95°48'15"
San Angelo	31°27'39"	100°26'03"
San Antonio	29°25'37"	98°29'06"
Sweetwater	32°28'24"	100°24'18"
Temple	31°06'02"	97°20'22"
Texarkana	33°25'29"	94°02'34"
Tyler	32°21'21"	95°17'52"
Victoria	28°48'01"	97°00'06"
Waco	31°33'12"	97°08'00"
Weslaco	26°09'24"	97°59'33"
Wichita Falls	33°54'34"	98°29'28"
Utah:		
Logan	41°44'03"	111°50'11"
Ogden	41°13'31"	111°58'21"
Provo	40°14'07"	111°39'34"
Salt Lake City	40°45'23"	111°53'26"
Vermont:		
Burlington	44°28'34"	73°12'46"
Rutland	43°36'29"	72°58'56"
St. Johnsbury	44°25'16"	72°01'13"
Windsor	44°28'38"	72°23'32"
Virginia:		
Bristol	36°35'48"	82°11'04"
Charlottesville	38°01'52"	78°28'50"
Goldvein	38°26'54"	77°39'19"
Hampton	37°01'32"	76°20'32"
Harrisonburg	38°27'01"	78°52'07"
Lynchburg	37°24'51"	79°08'37"
Norfolk	36°51'10"	76°17'21"
Norton	36°56'05"	82°37'31"
Petersburg	37°13'40"	77°24'15"
Portsmouth	36°50'12"	76°17'54"
Richmond	37°32'15"	77°26'09"
Roanoke	37°16'13"	79°56'44"
Staunton	38°09'02"	79°04'34"

State and community	Latitude	Longitude
Virgin Islands:		
Charlotte Amalie	18°20'36"	64°55'53"
Christiansted	17°44'44"	64°42'21"
Washington:		
Bellingham	48°45'02"	122°28'36"
Kennewick	46°12'28"	119°08'32"
Lakewood Center	47°07'37"	122°31'15"
Pasco	46°13'50"	119°05'27"
Pullman	46°43'42"	117°10'46"
Richland	46°16'36"	119°16'21"
Seattle	47°36'32"	122°20'12"
Spokane	47°39'32"	117°25'33"
Tacoma	47°14'59"	122°26'15"
Yakima	46°36'09"	120°30'39"
West Virginia:		
Bluefield	37°15'29"	81°13'20"
Charleston	38°21'01"	81°37'52"
Clarksburg	39°16'50"	80°20'38"
Grandview	37°49'28"	81°04'20"
Huntington	38°25'12"	82°26'33"
Morgantown	39°37'41"	79°57'28"
Oak Hill	37°56'31"	81°08'45"
Parkersburg	39°15'57"	81°33'46"
Weston	39°02'19"	80°28'05"
Wheeling	40°04'03"	80°43'20"
Wisconsin:		
Eau Claire	44°48'31"	91°29'49"
Fond Du Lac	43°46'35"	88°26'52"
Green Bay	44°30'46"	88°00'50"
Janesville	42°40'52"	89°01'39"
Kenosha	42°35'04"	87°49'14"
La Crosse	43°48'48"	91°15'02"
Madison	43°04'23"	89°22'55"
Milwaukee	43°02'19"	87°54'15"
Rhinelander	45°38'09"	89°24'50"
Superior	46°43'14"	92°06'07"
Wausau	44°57'30"	89°37'40"
Wyoming:		
Casper	42°51'00"	106°19'22"
Cheyenne	41°08'09"	104°49'07"
Rawlins	41°47'23"	107°14'37"
Riverton	43°01'29"	108°23'03"

[37 FR 3278, Feb. 12, 1972, as amended at 37 FR 13866, July 14, 1972; 51 FR 18451, May 20, 1986; 51 FR 44608, Dec. 11, 1986; 54 FR 25716, June 19, 1989]

§ 76.54 Significantly viewed signals; method to be followed for special showings.

(a) Signals that are significantly viewed in a county (and thus are deemed to be significantly viewed within all communities within the county) are those that are listed in Appendix A of the memorandum opinion and order on reconsideration of the Cable Television Report and Order (Docket 18397 et al.), FCC 72-530.

(b) Significant viewing in a cable television community for signals not shown as significantly viewed under paragraph (a) or (d) of this section may be demonstrated by an independent professional audience survey of non-cable television homes that covers at least two weekly periods separated by at least thirty (30) days but no more than one of which shall be a week between the months of April and September. If two surveys are taken, they shall include samples sufficient to assure that the combined surveys result in an average figure at least one standard error above the required viewing level. If surveys are taken for more than 2-weekly periods in any 12 months, all such surveys must result in an average figure at least one standard error above the required viewing level. If a cable television system serves more than one community, a single survey may be taken, provided that the sample includes non-cable television homes from each community that are proportional to the population.

(c) Notice of a survey to be made pursuant to paragraph (b) of this section shall be served on all licensees of permittees of television broadcast stations within whose predicted Grade B contour the cable community or communities are located, in whole or in part, and on all other system community units, franchisees, and franchise applicants in the cable community or communities at least thirty (30) days prior to the initial survey period. Furthermore, if a survey is undertaken pursuant to the provisions of § 76.33(a)(2) of the rules, notice shall also be served on the franchising authority. Such notice shall include the name of the survey organization and a description of the procedures to be used. Objections to survey organizations or procedures shall be served on the party sponsoring the survey within twenty (20) days after receipt of such notice.

(d) Signals of television broadcast stations not encompassed by the surveys (for the periods May 1970, November 1970 and February/March 1971) used in establishing appendix B of the *Memorandum Opinion and Order on Reconsideration of Cable Television Report and Order*, FCC 72-530, 36 FCC 2d 326 (1972), may be demonstrated as significantly viewed on a county-wide basis by independent professional audience surveys which cover three separate, consecutive four-week periods and are otherwise comparable to the surveys used in compiling the above-referenced appendix B: *Provided, however,* That such demonstration shall be based upon audience survey data for the first three years of the subject station's broadcast operations.

[37 FR 3278, Feb. 12, 1972, as amended at 37 FR 13866, July 14, 1972; 40 FR 48930, Oct. 20, 1975; 41 FR 32429, Aug. 3, 1976; 42 FR 19346, Apr. 13, 1977; 53 FR 17051, May 13, 1988]

§ 76.60 Carriage of other television signals.

A cable system may carry the signals of any television station including low power television stations, television translator stations, foreign television stations, subscription television broadcasts, satellite distributed program services, direct broadcast satellite stations and programming from any other source. A cable system may also carry any ancillary service transmission on the vertical blanking interval or the aural baseband of any television broadcast signal including, but not limited to, multichannel television sound and teletext.

[54 FR 25716, June 19, 1989]

§ 76.62 Manner of carriage.

Where a television broadcast signal is carried by a cable system, the signal shall be carried without material degradation and programs broadcast shall be carried in full, without deletion or alteration of any portion thereof.

[54 FR 25716, June 19, 1989]

§ 76.66 Input selector switches and consumer education.

(a) A cable system operator shall offer to supply to each new subscriber and each existing subscriber an input selector switch for each separate television receiver for which cable service is provided by the cable operator. The operator shall comply with the following in offering the switch and installing cable service:

(1) Offer to supply and install a switch for all new and existing subscribers within six months of June 10, 1987, and thereafter on an annual basis until June 10, 1992, unless the subscriber already has an input selector switching device or his/her television receiver has such a device built-in;

(2) A cable operator may charge for purchase or lease of switches and associated hardware and may separately charge for installation of switches for existing subscribers. A cable operator may not charge new subscribers a separate fee for switch installation.

(i) A cable operator may offer to inspect and/or install antenna grounding systems for outdoor antennas and shall separately charge for such services.

(3) A cable system operator is not required to provide a switch to any subscriber who declines the required offer, but is not thereby relieved from making the offer to any such subscriber thereafter on an annual basis;

(4) The switch offer shall be made using test chosen by the cable operator that includes the following points:

(i) An offer to supply an input selector switch for each separate television receiver to which cable service is provided;

(ii) The switch connects both to the cable service and an antenna, and enables selection between cable service and off-the-air broadcast television signals;

(iii) If the subscriber already has switching capability, either in a separate device or as a built-in feature of his/her television receiver, an additional switch may not be needed;

(iv) If the subscriber desires switching capability, he/she may have the cable system install a switch or may obtain a switch from it with written self-installation instructions;

(v) Switching capability may be obtained from other from other suppliers; and,

(vi) For the subscriber's convenience, attach an offer response form to be returned to the cable system's business office.

(5) Comply with the following requirements with respect to antennas:

(i) If an antenna is present, the operator shall not recommend that the antenna be removed;

(ii) If an antenna is not present, the operator shall inform the subscriber that the switch will be operational only if it is connected to an antenna;

(iii) Where the operator installs a switch and an antenna is present, it shall connect the switch to that existing antenna.

(iv) Cable operators must provide to subscribers information on the potential for interference related to the input selector switch and the associated connections and suggest measures to take to avoid such problems. Such suggestions must include the recommendations that shielded coaxial cable be used between the receiver and the switch terminals and that at least four feet of shielded coaxial cable be used for connecting switch terminals to any unshielded antenna leads.

(b) Individual cable subscribers are not required to purchase or lease input selector switches from their cable system. Subscribers may obtain such switches from suppliers other than their cable systems. Although cable subscribers are encouraged to established and maintain independent access to off-the-air broadcast signals, they are not required to do so.

(c) The cable system operator shall provide the following information to each subscriber at the time of installation of cable service and to existing subscribers, in writing, by November 1, 1989, and annually thereafter to all subscribers. Operators may use whatever language they deem appropriate to convey the following:

(1) The cable system is not required to carry any off-the-air broadcast signal; but, of course, may choose to do so; thus,

(2) [Reserved]

(3) It may be necessary to use an antenna, in conjunction with an input selector switch, to access broadcast signals available off-the-air and not carried by the cable system;

(4) A description of the function of an input selector switch and state that its purpose is to aid the viewer in preserving independent access to off-the-air television service;

(5) The input selector switches may be obtained from suppliers other than the cable system and that there may be a range of switch options available, such as simple manual cable/broadcast switches, multiple input source switches, electronic switches, remote control switches, and receivers with built-in switches;

(6) Identify for their subscribers, by call sign and channel number, any full service broadcast signals not carried on the cable system whose predicted Grade B contour covers any portion of the cable community or that are "significantly viewed" in the cable community, as defined § 76.5(i) of the rules (the list of stations must be current to within one month of the distribution of the information required pursuant to this paragraph);

(7) Indicate that questions related to input selector switches should be directed to a specified individual at the cable system and provide a telephone number at which that person can be reached.

[52 FR 17576, May 11, 1987, as amended at 52 FR 45963, Dec. 3, 1987; 54 FR 25716, June 19, 1989; 54 FR 41843, Oct. 12, 1989]

EFFECTIVE DATE NOTE: At 53 FR 3212, Feb. 4, 1988, the effectiveness of § 76.66 (paragraph (a)(2) introductory text revised; and paragraphs (a)(2)(i) and (a)(5)(iv) added), was suspended until the uncertainties of a decision handed down by the U.S. Court of Appeals for the District of Columbia Circuit, are resolved. These regulations are stayed until further notice, pending further court and Commission action. For the convenience of the user, the superseded text appears as follows:

§ 76.66 Input selector switches and consumer education.

(a) * * *

* * * * *

(2) A cable operator may charge for the purchase or lease of switches and associated hardware and may separately charge for installation of switches for existing subscribers. However, a cable operator may not charge new subscribers a separate fee for switch installation.

* * * * *

§ 76.67 Sports broadcasts.

(a) No community unit located in whole or in part within the specified zone of a television broadcast station licensed to a community in which a sports event is taking place, shall, on request of the holder of the broadcast rights to that event, or its agent, carry the live television broadcast of that event if the event is not available live on a television broadcast signal carried by the community unit meeting the criteria specified in §§ 76.5(gg)(1) through 76.5(gg)(3) of this part. For purposes of this section, if there is no television station licensed to the community in which the sports event is taking place, the applicable specified zone shall be that of the television station licensed to the community with which the sports event or team is identified, or, if the event or local team is not identified with any particular community, the nearest community to which a television station is licensed.

(b) Notification of the programming to be deleted pursuant to this section shall include the following information:

(1) As to programming to be deleted from television broadcast signals regularly carried by the community unit:

(i) The name and address of the party requesting the program deletion;

(ii) The date, time and expected duration of the sports event the television broadcast of which is to be deleted;

(iii) The call letters of the television broadcast station(s) from which the deletion is to be made.

(2) As to programming to be deleted from television broadcast signals not regularly carried by the community unit:

(i) The name and address of the party requesting the program deletion;

(ii) The date, time and expected duration of the sports event the television broadcast of which is to be deleted.

(c) Notifications given pursuant to this section must be received, as to regularly scheduled events, no later than the Monday preceding the calendar week (Sunday-Saturday) during which the program deletion is to be made. Notifications as to events not regularly scheduled and revisions of notices previously submitted, must be received within twenty-four (24) hours after the time of the telecast to be deleted is known, but in any event no later than twenty-four (24) hours from the time the subject telecast is to take place.

(d) Whenever, pursuant to this section, a community unit is required to delete a television program on a signal regularly carried by the community unit, such community unit may, consistent with the rules contained in Subpart F of this part, substitute a program from any other television broadcast station. A program substituted may be carried to its completion, and the community unit need not return to its regularly carried signal until it can do so without interrupting a program already in progress.

(e) The provisions of this section shall not be deemed to require the deletion of any portion of a television signal which a community unit was lawfully carrying prior to March 31, 1972.

(f) The provisions of this section shall not apply to any community unit having fewer than 1,000 subscribers.

(Secs. 2, 3, 4, 5, 301, 303, 307, 308, 309, 315, 317, 48 Stat., as amended, 1064, 1065, 1066, 1068, 1081, 1082, 1083, 1084, 1085, 1088, 1089 (47 U.S.C. 152, 153, 154, 155, 301, 303, 307, 308, 309, 315, 317))

[40 FR 30649, July 22, 1975, as amended at 40 FR 53031, Nov. 14, 1975; 42 FR 19346, Apr. 13, 1977; 43 FR 20235, May 11, 1978; 52 FR 17577, May 11, 1987; 54 FR 41843, Oct. 12, 1989]

§ 76.70 Exemption from input selector switch rules.

(a) In any case of cable systems serving communities where no portion of the community is covered by the predicted Grade B contour of at least one full service broadcast television station, or non-commercial educational television translator station operating with 5 or more watts output power and where the signals of no such broadcast stations are "significantly viewed" in the county where such a cable system is located, the cable system shall be exempt from the provisions of § 76.66. Cable systems may be eligible for this exemption where they demonstrate with engineering studies prepared in accordance with § 73.686 of this chapter or other showings that broadcast signals meeting the above criteria are not actually viewable within the community.

(b) Where a new full service broadcast television station, or new noncommercial educational television translator station with 5 or more watts, or an existing such station of either type with newly upgraded facilities provides predicted Grade B service to a community served by a cable system previously exempt under paragraph (a) of this section, or the signal of any such broadcast station is newly determined to be "significantly viewed" in the county where such a cable system is located, the cable system at that time is required to comply fully with the provisions of § 76.66. Cable systems may retain their exemption under paragraph (a) of this section where they demonstrate with engineering studies prepared in accordance with § 73.686 of this chapter or other showings that broadcast signals meeting the above criteria are not actually viewable within the community.

[54 FR 25716, June 19, 1989]

Subpart E—Equal Employment Opportunity Requirements

Source: 50 FR 40855, Oct. 7, 1985, unless otherwise noted.

§ 76.71 Scope of application.

(a) The provisions of this subpart shall apply to any corporation, partnership, association, joint-stock company, or trust engaged primarily in the management or operation of any cable system. Cable entities subject to these provisions include those systems defined in § 76.5(a) of the rules and all satellite master antenna television systems serving 50 or more subscribers.

(b) *Employment units.* The provisions of this subpart shall apply to cable entities as employment units. Each cable entity may be considered a separate employment unit; however, where two or more cable entities are under common ownership or control and are interrelated in their local management, operation, and utilization of employees, they shall constitute a single employment unit.

(c) *Headquarters office.* A multiple cable operator shall treat as a separate employment unit each headquarters office to the extent the work of that office is primarily related to the operation of more than one employment unit as described in paragraph (b) of this section.

§ 76.73 General EEO policy.

(a) Equal opportunity in employment shall be afforded by each cable entity to all qualified persons, and no person shall be discriminated against in employment by such entity because of race, color, religion, national origin, age or sex.

(b) Each employment unit shall establish, maintain, and carry out a positive continuing program of specific practices designed to assure equal opportunity to every aspect of cable system employment policy and practice. Under the terms of its program, an employment unit shall:

(1) Define the responsibility of each level of management to ensure a positive application and vigorous enforcement of its policy of equal opportunity, and establish a procedure to review and control managerial and supervisory performance;

(2) Inform its employees and recognized employee organizations of the positive equal employment opportunity policy and program and enlist their cooperation;

(3) Communicate its equal employment opportunity policy and progam and its employment needs to sources of qualified applicants without regard to race, color, religion, national origin, age or sex, and solicit their recruitment assistance on a continuing basis;

(4) Conduct a continuing program to exclude every form of prejudice or discrimination based upon race, color, religion, national origin, age or sex from its personnel policies and practices and working conditions; and

(5) Conduct a continuing review of job structure and employment practices and adopt positive recruitment, training, job design, and other measures needed to ensure genuine equality of opportunity to participate fully in all organizational units, occupations, and levels of responsibility.

§ 76.75 EEO program requirements.

An employment unit's equal employment opportunity program should reasonably address itself to the specific areas set forth below, to the extent possible and to the extent that they are appropriate in terms of employment unit size, location, etc.:

(a) Disseminate its equal employment opportunity program to job applicants, employees, and those with whom it regularly does business. For example, this requirement may be met by:

(1) Posting notices in the employment unit's office and places of employment informing employees, and applicants for employment, of their equal employment opportunity rights, and their right to notify the Equal Employment Opportunity Commission, the Federal Communications Commission, or other appropriate agency, if they believe they have been discriminated against. Where a significant percentage of employees, employment applicants, or residents of the community of a cable television system of the relevant labor area are Hispanic, such notices should be posted in Spanish and English. Similar use should be made of other languages in such posted equal employment opportunity notices, where appropriate;

(2) Placing a notice in bold type on the employment application informing prospective employees that discrimination because of race, color, religion, national origin, age or sex is prohibited and that they may notify the Equal Employment Opportunity Commission, the Federal Communications Commission, or other appropriate agency if they believe they have been discriminated against.

(b) Use minority organizations, organizations for women, media, educational institutions, and other potential sources of minority and female applicants, to supply referrals whenever job vacancies are available in its operation. For example, this requirement may be met by:

(1) Placing employment advertisements in media that have significant circulation among minority-group people in the recruiting area;

(2) Recruiting through schools and colleges with significant minority-group enrollments;

(3) Maintaining systematic contacts with minority and human relations organizations, leaders, and spokesmen to encourage referral of qualified minority or female applicants;

(4) Encouraging current employees to refer minority or female applicants;

(5) Making known to the appropriate recruitment sources in the employer's immediate area that qualified minority members and females are being sought for consideration whenever the employment unit hires.

(c) Evaluate its employment profile and job turnover against the availability of minorities and women in its franchise area. For example, this requirement may be met by:

(1) Comparing composition of relevant labor area with the composition of the entity's employees;

(2) Comparing its employees, within each job category, with the people available for such positions;

(3) Where there is underrepresentation of either minorities and/or women, examining the company's personnel policies and practices to assure that they do not inadvertently screen out any protected group and take appropriate action where necessary.

NOTE: These data are generally available on a metropolitan statistical area (MSA), primany metropolitan statistical area (PMSA) or county basis.

(d) Undertake to offer promotions of minorities and women in a non-discriminatory fashion to positions of greater responsibility. For example, this requirement may be met by:

(1) Instructing those who make decisions on placement and promotion that minority employees and females are to be considered without discrimination, and that job areas in which there is little or no minority or female representation should be reviewed to determine whether this results from discrimination;

(2) Giving minority groups and female employees equal opportunity for positions which lead to higher positions. Inquiring as to the interest and skills of all lower paid employees with respect to any of the higher paid positions, followed by assistance, counselling, and effective measures to enable employees with interest and potential to qualify themselves for such positions;

(3) Providing opportunity to perform overtime work on a basis that does not discriminate against qualified minority group or female employees.

(e) Encourage minority and female entrepreneurs to conduct business with all parts of its operation. For example, this requirement may be met by:

(1) Recruiting as wide as possible a pool of qualified entrepreneurs from sources such as employee referrals, community groups, contractors, associations, and other sources likely to be representative of minority and female interests.

(f) Analyze the results of its efforts to recruit, hire, promote, and use the services of minorities and women and explain any difficulties encountered in implementing its equal employment opportunity program. For example, this requirement may be met by:

(1) Where union agreements exist, cooperating with the union or unions in the development of programs to assure qualified minority persons or females of equal opportunity for employment, and including an effective nondiscrimination clause in new or renegotiated union agreements;

(2) Avoiding use of selection techniques or tests that have the effect of discriminating against qualified minority groups or females;

(3) Reviewing seniority practices to ensure that such practices are nondiscriminatory;

(4) Examining rates of pay and fringe benefits for employees having the same duties, and eliminating any inequities based upon race or sex discrimination.

§ 76.77 Reporting Requirements.

(a) *Annual employment report.* Each employment unit with six or more full-time employees shall file an annual employment report (FCC Form 395A) with the Commission on or before May 1 of each year. Employment data on the annual employment report shall reflect the figures from any one payroll period in January, February, or March of the year during which the report is filed. Unless instructed otherwise by the FCC, the same payroll period shall be used for each successive annual employment reports.

(b) *Certification of Compliance.* The Commission will use the information submitted on Form 395A to determined whether cable systems are in compliance with the provisions of this subpart. Cable systems found to be in compliance with these rules will receive a Certificate of Compliance.

(c) *Investigations.* The Commission will investigate each cable system at least once every five years. Cable systems are required to submit supplemental investigation information with their regular Form 395A reports in the years they are investigated.

§ 76.79 Records available for public inspection.

(a) A copy of every annual employment report, and any other employment report filed with the Commission, and complaint report that has been filed with the Commission, and copies of all exhibits, letters, and other documents filed as part thereof, all amendments thereto, all correspondence between the cable entity and the Commission pertaining to the reports after they have been filed in all documents incorporated therein by reference, unless specifically exempted from the requirement, are open for public inspection at the offices of the Commission in Washington, DC.

(b) Every employment unit shall maintain for public inspection a file containing copies of all annual employment reports. Each document shall be retained for a period of five years. The file shall be maintain at the central office and at every location with more than five full-time employees. A headquarters employment unit file and a file containing a consolidated set of all documents pertaining to the other employment units of a multiple cable operator shall be maintained at the central office of the headquarters employment unit. The cable entity shall provide reasonable accommodations at these locations for undisturbed inspection of his equal employment opportunity records by members of the public during regular business hours.

Subpart F—Nonduplication Protection and Syndicated Exclusivity

Source: 53 FR 27171, July 19, 1988, unless otherwise noted.

§ 76.92 Network non-duplication; extent of protection.

(a) Upon receiving notification pursuant to § 76.94, a cable community unit located in whole or in part within the geographic zone for a network program, the network non-duplication rights to which are held by a commercial television station licensed by the Commission, shall not carry that program as broadcast by any other television signal, except as otherwise provided below.

(b) For purposes of this section, the order of nonduplication priority of television signals carried by a community unit is as follows:

(1) First, all television broadcast stations within whose specified zone the community of the community unit is located, in whole or in part;

(2) Second, all smaller market television broadcast stations within whose secondary zone the community of the community unit is located, in whole or in part.

(c) For purposes of this section, all noncommercial educational television broadcast stations licensed to a community located in whole or in part within a major television market as specified in § 76.51 shall be treated in the same manner as a major market commercial television broadcast station, and all noncommercial educational television broadcast stations not licensed to a community located in whole or in part within a major television market shall be treated in the same manner as a smaller market television broadcast station.

(d) Any community unit operating in a community to which a 100-watt or higher power translator is located within the predicted Grade B signal contour of the television broadcast station that the translator station retransmits, and which translator is carried by the community unit shall, upon request of such translator station licensee or permittee, delete the duplicating network programming of any television broadcast station whose reference point (See Section 76.53) is more than 55 miles from the community of the community unit.

(e) Any community unit which operates in a community located in whole or in part within the secondary zone of a smaller market television broadcast station is not required to delete the duplicating network programming of any major market television broadcast station whose reference point (See § 76.53) is also within 55 miles of the community of the community unit.

(f) A community unit is not required to delete the duplicating network programming of any television broadcast station which is significantly viewed in the cable television community pursuant to § 76.54.

Note: With respect to network programming, the geographic zone within which the television station is entitled to enforce network non-duplication protection and priority of shall be that geographic area agreed upon between the network and the television station. In no event shall such rights exceed the area within which the television station may acquire broadcast territorial exclusivity rights as defined in § 73.658(m), except that small market television stations shall be entitled to a secondary protection zone of 20 additional miles. To the extent rights are obtained for any hyphenated market named in § 76.51, such rights shall not exceed those permitted under § 73.658(m) for each named community in that market.

[53 FR 27171, July 19, 1988, as amended at 54 FR 12918, Mar. 29, 1989]

§ 76.93 Parties entitled to network non-duplication protection.

Television broadcast station licensees shall be entitled to exercise non-duplication rights pursuant to § 76.92 in accordance with the contractual provisions of the network-affiliate agreement.

§ 76.94 Notification.

(a) In order to exercise non-duplication rights pursuant to § 76.92, television stations shall notify each cable television system operator of the non-duplication sought in accordance with the requirements of this Section. Except as otherwise provided in paragraph (b) of this section, non-duplication protection notices shall include the following information:

(1) The name and address of the party requesting non-duplication protection and the television broadcast station holding the non-duplication right;

(2) The name of the program or series (including specific episodes where necessary) for which protection is sought; and

(3) The dates on which protection is to begin and end.

(b) Broadcasters entering into contracts providing for network non-duplication protection shall notify affected cable systems within 60 calendar days of the signing of such a contract; provided, however, that for such contracts signed before May 5, 1989, a broadcaster may provide notice on or before June 19, 1989. In the event the broadcaster is unable based on the information contained in the contract, to furnish all the information required by paragraph (a) of this section at that time, the broadcaster must provide modified notices that contain the following information:

(1) The name of the network (or networks) which has (or have) extended non-duplication protection to the broadcaster;

(2) The time periods by time of day (local time) and by network (if more than one) for each day of the week that the broadcaster will be broadcasting programs from that network (or networks) and for which non-duplication protection is requested; and

(3) The duration and extent (*e.g.*, simultaneous, same-day, seven-day, etc.) of the non-duplication protection which has been agreed upon by the network (or networks) and the broadcaster.

(c) Except as otherwise provided in paragraph (d) of this section, a broadcaster shall be entitled to non-duplication protection beginning on the later of:

(1) The date specified in its notice (as described in paragraphs (a) or (b) of this section, whichever is applicable) to the cable television system; or

(2) The first day of the calendar week (Sunday-Saturday) that begins 60 days after the cable television system receives notice from the broadcaster.

(d) A broadcaster shall provide the following information to the cable television system under the following circumstances:

(1) In the event the protection specified in the notices described in paragraphs (a) or (b) of this section has been limited or ended prior to the time specified in the notice, or in the event a time period, as identified to the cable system in a notice pursuant to paragraph (b) of this section, for which a broadcaster has obtained protection is shifted to another time of day or another day (but not expanded), the broadcaster shall, as soon as possible, inform each cable television system operator that has previously received the notice of all changes from the original notice. Notice to be furnished "as soon as possible" under this subsection shall be furnished by telephone, telegraph, facsimile, overnight mail or other similar expedient means.

(2) In the event the protection specified in the modified notices described in paragraph (b) of this section has been expanded, the broadcaster shall, at least 60 calendar days prior to broadcast of a protected program entitled to such expanded protection, notify each cable system operator that has previously received notice of all changes from the original notice.

(e) In determining which programs must be deleted from a television signal, a cable television system operator may rely on information from any of the following sources published or otherwise made available:

(1) Newspapers or magazines of general circulation.

(2) A television station whose programs may be subject to deletion. If a cable television system asks a television station for information about its program schedule, the television station shall answer the request:

(i) Within ten business days following the television station's receipt of the request; or

(ii) Sixty days before the program or programs mentioned in the request for information will be broadcast; whichever comes later.

(3) The broadcaster requesting exclusivity.

(f) A broadcaster exercising exclusivity pursuant to § 76.92 shall provide to the cable system, upon request, an exact copy of those portions of the contracts, such portions to be signed by both the network and the broadcaster, setting forth in full the provisions pertinent to the duration, nature, and extent of the non-duplication terms concerning broadcast signal exhibition to which the parties have agreed.

[54 FR 12918, Mar. 29, 1989; 54 FR 25857, June 20, 1989]

§ 76.95 Exceptions.

(a) The provisions of §§ 76.92-76.94 shall not apply to a cable system serving fewer than 1,000 subscribers. Within 60 days following the provision of service to 1,000 subscribers, the operator of each such system shall file a notice to that effect with the Commission, and serve a copy of that notice on every television station that would be entitled to exercise network non-duplication protection against it.

(b) Network non-duplication protection need not be extended to a higher priority station for one hour following the scheduled time of completion of the broadcast of a live sports event by that station or by a lower priority station against which a cable community unit would otherwise be required to provide non-duplication protection following the scheduled time of completion.

[53 FR 27171, July 19, 1989, as amended at 54 FR 12919, Mar. 29, 1989]

§ 76.97 Effective dates.

The network non-duplication protection and exceptions thereto outlined in §§ 76.92 through 76.95 shall become enforceable on January 1, 1990. The rules in effect on May 18, 1988, will remain operative until January 1, 1990.

[54 FR 12919, Mar. 29, 1989; 54 FR 25857, June 20, 1989]

§ 76.151 Syndicated program exclusivity: extent of protection.

Upon receiving notification pursuant to § 76.155, a cable community unit located in whole or in part within the geographic zone for a syndicated program, the syndicated exclusivity rights to which are held by a commercial television station licensed by the Commission, shall not carry that program as broadcast by any other television signal, except as otherwise provided below.

NOTE: With respect to each syndicated program, the geographic zone within which the television station is entitled to enforce syndicated exclusivity rights shall be that geographic area agreed upon between the non-network program supplier, producer or distributor and the television station. In no event shall such zone exceed the area within which the television station has acquired broadcast territorial exclusivity rights as defined in § 73.658(m). To the extent rights are obtained for any hyphenated market named in § 76.51, such rights shall not exceed those permitted under § 73.658(m) for each named community in that market.

[53 FR 27171, July 19, 1988, as amended at 54 FR 12919, Mar. 29, 1989]

§ 76.153 Parties entitled to syndicated exclusivity.

(a) Television broadcast station licensees shall be entitled to exercise exclusivity rights pursuant to § 76.151 in accordance with the contractual provisions of their syndicated program license agreements, consistent with § 76.159.

(b) Distributors of syndicated programming shall be entitled to exercise exclusive rights pursuant to § 76.151 for a period of one year from the initial broadcast syndication licensing of such programming anywhere in the United States; provided, however, that distributors shall not be entitled to exercise such rights in areas in which the programming has already been licensed.

§ 76.155 Notification.

(a) In order to exercise exclusivity rights pursuant to § 76.151, distributors or television stations shall notify each cable television system operator of the exclusivity sought in accordance with the requirements of this section. Syndicated program exclusivity notices shall include the following information:

(1) The name and address of the party requesting exclusivity and the

television broadcast station or other party holding the exclusive right;

(2) The name of the program or series (including specific episodes where necessary) for which exclusivity is sought;

(3) The dates on which exclusivity is to begin and end.

(b) Broadcasters entering into contracts on or after August 18, 1988, which contain syndicated exclusivity protection shall notify affected cable systems within sixty calendar days of the signing of such a contract. Broadcasters who have entered into contracts prior to August 18, 1988, and who comply with the requirements specified in § 76.159 shall notify affected cable systems on or before June 19, 1989; provided, however, that with respect to such pre-August 18, 1988, contracts that require amendment in order to invoke the provisions of these rules, notification may be given within sixty calendar days of the signing of such amendment. A broadcaster shall be entitled to exclusivity protection beginning on the later of:

(1) The date specified in its notice to the cable television system; or

(2) The first day of the calendar week (Sunday-Saturday) that begins 60 days after the cable television system receives notice from the broadcaster;

(c) In determining which programs must be deleted from a television broadcast signal, a cable television system operator may rely on information from any of the following sources published or otherwise made available.

(1) Newspapers or magazines of general circulation;

(2) A television station whose programs may be subject to deletion. If a cable television system asks a television station for information about its program schedule, the television station shall answer the request:

(i) Within ten business days following the television station's receipt of the request; or

(ii) Sixty days before the program or programs mentioned in the request for information will be broadcast; whichever comes later.

(3) The distributor or television station requesting exclusivity.

(d) In the event the exclusivity specified in paragraph (a) of this section has been limited or has ended prior to the time specified in the notice, the distributor or broadcaster who has supplied the original notice shall, as soon as possible, inform each cable television system operator that has previously received the notice of all changes from the original notice. In the event the original notice specified contingent dates on which exclusivity is to begin and/or end, the distributor or broadcaster shall, as soon as possible, notify the cable television system operator of the occurrence of the relevant contingency. Notice to be furnished "as soon as possible" under this subsection shall be furnished by telephone, telegraph, facsimile, overnight mail or other similar expedient means.

[53 FR 27171, July 19, 1988, as amended at 54 FR 12919, Mar. 29, 1989]

§ 76.156 Exceptions.

(a) Notwithstanding the requirements of §§ 76.151-76.155, a broadcast signal is not required to be deleted from a cable community unit when that cable community unit falls, in whole or in part, within that signal's grade B contour, or when the signal is significantly viewed pursuant to § 76.54 in the cable community.

(b) The provisions of §§ 76.151-76.155 shall not apply to a cable system serving fewer than 1,000 subscribers. Within 60 days following the provision of service to 1,000 subscribers, the operator of each such system shall file a notice to that effect with the Commission, and serve a copy of that notice on every television station that would be entitled to exercise syndicated exclusivity protection against it.

§ 76.157 Exclusivity contracts.

A distributor or television station exercising exclusivity pursuant to § 76.151 shall provide to the cable system, upon request, an exact copy of those portions of the exclusivity contracts, such portions to be signed by both the distributor and the television station, setting forth in full the provisions pertinent to the duration, nature, and extent of the exclusivity terms concerning broadcast signal exhibition to which the parties have agreed.

§ 76.158 Indemnification contracts.

No licensee shall enter into any contract to indemnify a cable system for liability resulting from failure to delete programming in accordance with the provisions of this subpart unless the licensee has a reasonable basis for concluding that such program deletion is not required by this subpart.

[54 FR 12919, Mar. 29, 1989]

§ 76.159 Requirements for invocation of protection.

For a station licensee to be eligible to invoke the provisions of this subpart, it must have a contract or other written indicia that it holds syndicated exclusivity rights for the exhibition of the program in question. Contracts entered on or after August 18, 1988, must contain the following words: "the licensee [or substitute name] shall, by the terms of this contract, be entitled to invoke the protection against duplication of programming imported under the Compulsory Copyright License, as provided in § 76.151 of the FCC rules [or 'as provided in the FCC's syndicated exclusivity rules']." Contracts entered into prior to August 18, 1988, must contain either the foregoing language or a clear and specific reference to the licensee's authority to exercise exclusivity rights as to the specific programming against cable television broadcast signal carriage by the cable system in question upon the contingency that the government reimposed syndicated exclusivity protection. In the absence of such a specific reference in contracts entered into prior to August 18, 1988, the provisions of these rules may be invoked only if (a) the contract is amended to include the specific language referenced above or (b) a specific written acknowledgment is obtained from the party from whom the broadcast exhibition rights were obtained that the existing contract was intended, or should now be construed by agreement of the parties, to include such rights. A general acknowledgment by a supplier of exhibition rights that specific contract language was intended to convey rights under these rules will be accepted with respect to all contracts containing that specific language. Nothing in this Section shall be construed as a grant of exclusive rights to a broadcaster where such rights are not agreed to by the parties.

[54 FR 12919, Mar. 29, 1989]

§ 76.161 Substitutions.

Whenever, pursuant to the requirements of the syndicated exclusivity rules, a community unit is required to delete a television program on a broadcast signal that is permitted to be carried under the Commission's rules, such community unit may, consistent with these rules and the sports blackout rules at 47 CFR 76.67, substitute a program from any other television broadcast station. Programs substituted pursuant to this section may be carried to their completion.

[54 FR 12920, Mar. 29, 1989]

§ 76.163 Effective dates.

No cable system shall be required to delete programming pursuant to the provisions of §§ 76.151 through 76.159 prior to January 1, 1990.

[54 FR 12920, Mar. 29, 1989]

Subpart G—Cablecasting

§ 76.205 Origination cablecasts by candidates for public office.

(a) *General requirements.* If a cable television system operator shall permit any legally qualified candidate for public office to use the system's cablecasting channel(s) and facilities therefor, the system operator shall afford equal opportunities to all other such candidates for that office: *Provided, however,* That such cable television system operator shall have no power of censorship over the material cablecast by any such candidate: *And provided, further,* That an appearance by a legally qualified candidate on any:

(1) Bona fide newscast,

(2) Bona fide news interview,

(3) Bona fide news documentary (if the appearance of the candidate is incidental to the presentation of the

subject or subjects covered by the news documentary), or

(4) On-the-spot coverage of bona fide news events (including but not limited to political conventions and activities incidental thereto), shall not be deemed to be use of the facilities of the system within the meaning of this paragraph.

NOTE: The fairness doctrine is applicable to these exempt categories. See § 76.209.

(b) *Charges for use of cable systems.* The charges, if any, made for the use of any cable television system by any person who is a legally qualified candidate for any public office in connection with his campaign for nomination for election, or election, to such office shall not exceed:

(1) During the 45 days preceding the date of a primary or primary runoff election and during the 60 days preceding the date of a general or special election in which such person is a candidate, the lowest unit charge of the cable television system for the same class and amount of time for the same period, and

(2) At any other time the charges made for comparable use of such system by other users thereof. The rates, if any, charged all such candidates for the same office shall be uniform and shall not be rebated by any means direct or indirect. A candidate shall be charged no more than the rate the cable television system would charge if the candidate were a commercial advertiser whose advertising was directed to promoting its business within the same area as that encompassed by the particular office for which such person is a candidate. All discount privileges otherwise offered by a cable television system to commercial advertisers shall be available upon equal terms to candidates for public office.

(c) *Discrimination between candidates.* In making time available to candidates for public office, no cable television system operator shall make any discrimination between candidates in practices, regulations, facilities, or services for or in connection with the service rendered pursuant to this part, or make or give any preference to any candidate for public office or subject any such candidate to any prejudice or disadvantage; nor shall any cable television system operator make any contract or other agreement which shall have the effect of permitting any legally qualified candidate for any public office to cablecast to the exclusion of other legally qualified candidates for the same public office.

(d) *Records, inspection.* Every cable television system operator shall keep and permit public inspection of a complete record (political file) of all requests for cablecast time made by or on behalf of candidates for public office, together with an appropriate notation showing the disposition made by the cable television system operator of such requests, and the charges made, if any, if request is granted. When free time is provided for use by or on behalf of such candidates, a record of the free time provided shall be placed in the political file. All records required by this paragraph shall be placed in the political file as soon as possible and shall be retained for a period of two years.

(e) *Time of request.* A request for equal opportunities for use of the origination channel(s) must be submitted to the cable television system operator within one (1) week of the day on which the first prior use, giving rise to the right of equal opportunities, occurred: *Provided, however,* That where a person was not a candidate at the time of such first prior use, he shall submit his request within one (1) week of the first subsequent use after he has become a legally qualified candidate for the office in question.

(f) *Burden of proof.* A candidate requesting such equal opportunities of the cable television system operator, or complaining of noncompliance to the Commission, shall have the burden of proving that he and his opponent are legally qualified candidates for the same public office.

[43 FR 32796, July 28, 1978, as amended at 45 FR 76179, Nov. 18, 1980]

§ 76.209 Fairness doctrine; personal attacks; political editorials.

(a) A cable television system operator engaging in origination cablecasting shall afford reasonable opportunity for the discussion of conflicting views on issues of public importance.

NOTE: See public notice, "Applicability of the Fairness Doctrine in the Handling of Controversial Issues of Public Importance," 29 FR 10415.

(b) When, during such origination cablecasting, an attack is made upon the honesty, character, integrity, or like personal qualities of an identified person or group, the cable television system operator shall, within a reasonable time and in no event later than one (1) week after the attack, transmit to the person or group attacked:

(1) Notification of the date, time, and identification of the cablecast;

(2) A script or tape (or an accurate summary if a script or tape is not available) of the attack; and

(3) An offer of a reasonable opportunity to respond over the system's facilities.

(c) The provisions of paragraph (b) of this section shall not apply to cablecast material which falls within one or more of the following categories:

(1) Personal attacks on foreign groups or foreign public figures;

(2) Personal attacks occurring during uses by legally qualified candidates.

(3) Personal attacks made during cablecasts not included in paragraph (b)(2) of this section and made by legally qualified candidates, their authorized spokespersons or those associated with them in the campaign, on other such candidates, their authorized spokespersons or persons associated with the candidates in the campaign; and

(4) Bona fide newscasts, bona fide news interviews, and on-the-spot coverage of bona fide news events (including commentary or analysis contained in the foregoing programs, but, the provisions of paragraph (b) of this section shall be applicable to editorials of the cable television system operator).

(d) Where a cable television system operator, in an editorial, (1) endorses or (2) opposes a legally qualified candidate or candidates, the system operator shall, within 24 hours of the editorial, transmit to respectively (i) the other qualified candidate or candidates for the same office, or (ii) the candidate opposed in the editorial, (*a*) notification of the date, time, and channel of the editorial; (*b*) a script or tape of the editorial; and (*c*) an offer of a reasonable opportunity for a candidate or a spokesman of the candidate to respond over the system's facilities: *Provided, however,* That where such editorials are cablecast within 72 hours prior to the day of the election, the system operator shall comply with the provisions of this paragraph sufficiently far in advance of the broadcast to enable the candidate or candidates to have a reasonable opportunity to prepare a response and to present it in a timely fashion.

[37 FR 3278, Feb. 12, 1972, as amended at 42 FR 19347, Apr. 13, 1977; 44 FR 45956, Aug. 6, 1979]

§ 76.213 Lotteries.

(a) No cable television system operator, except as in paragraph (c), when engaged in origination cablecasting shall transmit or permit to be transmitted on the origination cablecasting channel or channels any advertisement of or information concerning any lottery, gift, enterprise, or similar scheme, offering prizes dependent in whole or in part upon lot or chance, or any list of prizes drawn or awarded by means of any such lottery, gift enterprise, or scheme, whether said list contains any part or all of such prizes.

(b) The determination whether a particular program comes within the provisions of paragraph (a) of this section depends on the facts of each case. However, the Commission will in any event consider that a program comes within the provisions of paragraph (a) of this section if in connection with such program a prize consisting of money or thing of value is awarded to any person whose selection is dependent in whole or in part upon lot or chance, if as a condition of winning or competing for such prize, such winner or winners are required to furnish any money or thing of value or are required to have in their possession any product sold, manufactured, furnished, or distributed by a sponsor of a program cablecast on the system in question.

(c) The provisions of paragraphs (a) and (b) of this section shall not apply

advertisements or lists of prizes or
formation concerning:

1) A lottery conducted by a State
ting under authority of State law
ich is transmitted:

i) By a cable system located in that
ate;

ii) By a cable system located in an-
her State which conducts such a lot-
y; or

iii) By a cable system located in an-
her State which is integrated with a
ble system described in paragraphs
(1)(i) or (c)(1)(ii) of this section, if
mination of the receipt of such
nsmission by the cable systems in
h other State would be technically
easible.

2) Any gaming conducted by an
dian Tribe pursuant to the Indian
ming Regulatory Act. (25 U.S.C.
01 *et seq.*).

3) A lottery, gift enterprise or simi-
scheme, other than one described
paragraph (c)(1) of this section,
t is authorized or not otherwise
hibited by the State in which it is
ducted and which is:

i) Conducted by a not-for-profit or-
ization or a governmental organi-
ion; or

ii) Conducted as a promotional ac-
ity by a commercial organization
d is clearly occasional and ancillary
the primary business of that organi-
ion.

d) For the purposes of paragraph
lottery means the pooling of pro-
ds derived from the sale of tickets
chances and allotting those pro-
ds or parts thereof by chance to
e or more chance takers or ticket
rchasers. It does not include the
cing or accepting of bets or wagers
sporting events or contests.

e) For purposes of paragraph
(3)(i) of this section, the term "not-
-profit organization" means any or-
ization that would qualify as tax
empt under section 501 of the Inter-
l Revenue Code of 1986.

FR 3278, Feb. 12, 1972, as amended at 40
6210, Feb. 10, 1975; 42 FR 13947, Apr. 13,
7; 54 FR 20856, May 15, 1989; 55 FR
88, May 7, 1990]

§ 76.221 Sponsorship identification; list retention; related requirements.

(a) When a cable television system operator engaged in origination cablecasting presents any matter for which money, service, or other valuable consideration is either directly or indirectly paid or promised to, or charged or accepted by such cable television system operator, the cable television system operator, at the time of the cablecast, shall announce that such matter is sponsored, paid for, or furnished, either in whole or in part, and by whom or on whose behalf such consideration was supplied: *Provided, however,* That "service or other valuable consideration" shall not include any service or property furnished either without or at a nominal charge for use on, or in connection with, a cablecast unless it is so furnished in consideration for an identification of any person, product, service, trademark, or brand name beyond an identification reasonably related to the use of such service or property on the cablecast. For the purposes of this section, the term "sponsored" shall be deemed to have the same meaning as "paid for."

(b) Each cable television system operator engaged in origination cablecasting shall exercise reasonable diligence to obtain from employees, and from other persons with whom the system operator deals directly in connection with any matter for cablecasting, information to enable such system operator to make the announcement required by this section.

(c) In the case of any political origination cablecast matter or any origination cablecast matter involving the discussion of public controversial issues for which any film, record, transcription, talent, script, or other material or service of any kind is furnished, either directly or indirectly, to a cable television system operator as an inducement for cablecasting such matter, an announcement shall be made both at the beginning and conclusion of such cablecast on which such material or service is used that such film, record, transcription, talent, script, or other material or service has been furnished to such cable television system operator in connection with the transmission of such cablecast matter: *Provided, however,* That in the case of any cablecast of 5 minutes' duration or less, only one such announcement need be made either at the beginning or conclusion of the cablecast.

(d) The announcement required by this section shall, in addition to stating the fact that the origination cablecasting matter was sponsored, paid for or furnished, fully and fairly disclose the true identity of the person or persons, or corporation, committee, association or other unincorporated group, or other entity by whom or on whose behalf such payment is made or promised, or from whom or on whose behalf such services or other valuable consideration is received, or by whom the material or services referred to in paragraph (c) of this section are furnished. Where an agent or other person or entity contracts or otherwise makes arrangements with a cable television system operator on behalf of another, and such fact is known or by the exercise of reasonable diligence, as specified in paragraph (b) of this section, could be known to the system operator, the announcement shall disclose the identity of the person or persons or entity on whose behalf such agent is acting instead of the name of such agent. Where the origination cablecasting material is political matter or matter involving the discussion of a controversial issue of public importance and a corporation, committee, association or other unincorporated group, or other entity is paying for or furnishing the matter, the system operator shall, in addition to making the announcement required by this section, require that a list of the chief executive officers or members of the executive committee or of the board of directors of the corporation, committee, association or other unincorporated group, or other entity shall be made available for public inspection at the local office of the system. Such lists shall be kept and made available for a period of two years.

(e) In the case of origination cablecast matter advertising commercial products or services, an announcement stating the sponsor's corporate or trade name, or the name of the sponsor's product, when it is clear that the mention of the name of the product constitutes a sponsorship identification, shall be deemed sufficient for the purposes of this section and only one such announcement need be made at any time during the course of the cablecast.

(f) The announcement otherwise required by this section is waived with respect to the origination cablecast or "want ad" or classified advertisements sponsored by an individual. The waiver granted in this paragraph shall not extend to a classified advertisement or want and sponsorship by any form of business enterprise, corporate or otherwise. Whenever sponsorship announcements are omitted pursuant to this paragraph, the cable television system operator shall observe the following conditions:

(1) Maintain a list showing the name, address, and (where available) the telephone number of each advertiser;

(2) Make this list available to members of the public who have a legitimate interest in obtaining the information contained in the list.

(g) The announcements required by this section are waived with respect to feature motion picture film produced initially and primarily for theatre exhibition.

NOTE: The waiver heretofore granted by the Commission in its Report and Order, adopted November 16, 1960 (FCC 60-1369; 40 F.C.C. 95), continues to apply to programs filmed or recorded on or before June 20, 1963, when § 73.654(e), the predecessor television rule, went into effect.

(h) Commission interpretations in connection with the provisions of the sponsorship identification rules for the broadcasting services are contained in the Commission's Public Notice, entitled "Applicability of Sponsorship Indentification Rules," dated May 6, 1963 (40 F.C.C. 141), as modified by Public Notice, dated April 21, 1975 (FCC 75-418). Further interpretations are printed in full in various volumes of the Federal Communications Commission Reports. The interpretations made for the broadcasting services are equally applicable to origination cablecasting.

[39 FR 18401, Apr. 28, 1974, as amended at 42 FR 19348, Apr. 13, 1977; 42 FR 23510, May 9, 1977]

Subpart H—General Operating Requirements

§ 76.300 Scope of application.

(a) The provisions of §§ 76.306, 76.307 and 76.311 [1] are applicable to all cable television systems.

(b) The provisions of §§ 76.301 and 76.305 are not applicable to any cable television system serving fewer than 1,000 subscribers.

(Secs. 2, 3, 4, 5, 301, 303, 307, 308, 309, 315, 317, 48 Stat., as amended, 1064, 1065, 1066, 1068, 1081, 1082, 1083, 1084, 1085, 1088, 1089; (47 U.S.C. 152, 153, 154, 155, 301, 303, 307, 308, 309, 315, 317))

[42 FR 19349, Apr. 13, 1977, as amended at 43 FR 20235, May 11, 1978]

§ 76.301 Copies of rules.

The operator of a cable television system shall have a current copy of Part 76, and is expected to be familiar with the rules governing cable television systems. Copies of the Commission's rules may be obtained from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at nominal cost.

§ 76.305 Records to be maintained locally by cable system operators for public inspection.

(a) *Records to be maintained.* The operator of every cable television system having 1000 or more subscribers shall maintain for public inspection a file containing a copy of all records which are required to be kept by § 76.205(d) (origination cablecasts by candidates for public office); § 76.221(f) (sponsorship identification); and § 76.79 (EEO records available for public inspection).

(b) *Location of records.* The public inspection file shall be maintained at the office which the system operator maintains for the ordinary collection of subscriber charges, resolution of subscriber complaints, and other business or at any accessible place in the community served by the system unit(s) (such as a public registry for documents or an attorney's office). The public inspection file shall be available for public inspection at any time during regular business hours.

(c) The records specified in paragraph (a) of this section shall be retained for the periods specified in §§ 76.205(d), 76.221(f) and 76.79.

(d) *Reproduction of records.* Copies of any material in the public inspection file shall be available for machine reproduction upon request made in person, provided the requesting party shall pay the reasonable cost of reproduction. Requests for machine copies shall be fulfilled at a location specified by the system operator, within a reasonable period of time, which in no event shall be longer than seven days. The system operator is not required to honor requests made by mail but may do so if it chooses.

(Secs. 2, 3, 4, 5, 301, 303, 307, 308, 309, 315, 317, 48 Stat., as amended, 1064, 1065, 1066, 1068, 1081, 1082, 1083, 1084, 1085, 1088, 1089; (47 U.S.C. 152, 153, 154, 155, 301, 303, 307, 308, 309, 315, 317))

[39 FR 29186, Aug. 14, 1974, as amended at 40 FR 25024, June 12, 1975; 42 FR 19349, Apr. 13, 1977; 51 FR 26251, July 22, 1986]

§ 76.307 System inspection.

The operator of a cable television system shall make the system, its public inspection file (if required by § 76.305), and its records of subscribers available for inspection upon request by any authorized representative of the Commission at any reasonable hour.

[42 FR 19349, Apr. 13, 1977]

Subpart I—Forms and Reports

§ 76.400 Operator, mail address, and operational status changes.

Within 30 days following a change of Cable Television System Operator, and/or change of the operator's mail address, and/or change in the operational status of a cable television system, the Operator shall inform the Commission in writing of the following, as appropriate;

(a) The legal name of the operator and whether the operator is an individual, private association, partnership or corporation. See § 76.5(cc). If the operator is a partnership, the legal name of the partner responsible for communications with the Commisson shall be supplied;

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[1] Section 76.311 was removed at 50 FR 40857, Oct. 7, 1985.

(b) The assumed name (if any) used for doing business in each community;

(c) The new mail address, including zip code, to which all communications are to be directed;

(d) The nature of the operational status change (e.g., became operational on (year) (month), exceeded 49 subscribers, exceeded 499 subscribers, operation terminated temporarily, operation terminated permanently);

(e) The names and FCC identifiers (e.g., CA0001) of the system communities affected.

NOTE: FCC system community identifiers are routinely assigned upon registration. They have been assigned to all reported system communities based on previous Form 325 data. If a system community in operation prior to March 31, 1972, has not previously been assigned a system community identifier, the operator shall provide the following information in lieu of the identifier: Community Name, Community Type (i.e., incorporated town, unincorporated settlement, etc.) County Name, State, Operator Legal Name, Operator Assumed Name for Doing Business in the community, Operator Mail Address, and Year and Month service was first provided by the physical system.

[42 FR 20134, Apr. 18, 1977, as amended at 43 FR 49009, Oct. 20, 1978; 54 FR 41843, Oct. 12, 1989]

§ 76.403 Cable television system reports.

The operator of every operational cable television system shall correct and/or furnish information in response to forms, encompassing each community unit, mailed to said operator by the Commission. These include:

Community unit data—"Annual Report of Cable Television System," Form 325, Schedule 1

Physical system data—"Annual Report of Cable Television System," Form 325, Schedule 2

Operator ownership data—"Annual Report of Cable Television," Form 325, Schedules 3 and 4

These forms shall be completed and returned to the Commission within 60 days after the date of mailing by the Commission.

NOTE: The operator of a cable televisio
system having fewer than 1000 subscribe
shall only be required to file Schedules
and 2 of Form 325 for each community un

[50 FR 40857, Oct. 7, 1985]

Subpart J—Diversification of Contro

§ 76.501 Cross-ownership.

(a) No cable television system (in
cluding all parties under common con
trol) shall carry the signal of any tele
vision broadcast station if such syster
directly or indirectly owns, operate
controls, or has an interest in:

(1) A national television networ
(such as ABC, CBS, or NBC); or

(2) A TV broadcast station whos
predicted Grade B contour, compute
in accordance with § 73.684 of Part 7
of this chapter, overlaps in whole or i
part the service area of such syster
(i.e., the area within which the syster
is serving subscribers).

NOTE 1: The word "control" as used herei
is not limited to majority stock ownershi
but includes actual working control in wha
ever manner exercised.

NOTE 2: In applying the provisions of th
section, ownership and other interests i
broadcast licensees and cable television sy
tems will be attributed to their holders an
deemed cognizable pursuant to the follow
ing criteria:

(a) Except as otherwise provided herei
partnership and direct ownership interest
and any voting stock interest amounting t
5% or more of the outstanding voting stoc
of a corporate broadcast licensee or cabl
television system will be cognizable;

(b) No minority voting stock interest wi
be cognizable if there is a single holder o
more that 50% of the outstanding votin
stock of the corporate broadcast licensee o
cable television system in which the minor
ty interest is held;

(c) Investment companies, as defined in 1
U.S.C. 80a-3, insurance companies an
banks holding stock through their trust de
partments in trust accounts will be consid
ered to have a cognizable interest only i
they hold 10% or more of the outstandin
voting stock of a corporate broadcast licens
ee or cable television system, or if any o
the officers or directors of the broadcast li
censee or cable television system are repre
sentatives of the investment company, in
surance company or bank concerned. Hold
ings by a bank or insurance company will b
aggregated if the bank or insurance compa
ny has any right to determine how the stoc
will be voted. Holdings by investment com

panies will be aggregated if under common management.

(d) Attribution of ownership interests in a broadcast licensee or cable television system that are held indirectly by any party through one or more intervening corporations will be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting product, except that wherever the ownership percentage for any link in the chain exceeds 50%, it shall not be included for purposes of this multiplication. [For example, if A owns 10% of company X, which owns 60% of company Y, which owns 25% of "Licensee", then X's interest in "Licensee" would be 25% (the same as Y's interest since X's interest in Y exceeds 50%), and A's interest in "Licensee" would be 2.5% (0.1 × 0.25). Under the 5% attribution benchmark, X's interest in "Licensee" would be cognizable, while A's interest would not be cognizable.]

(e) Voting stock interests held in trust shall be attributed to any person who holds or shares the power to vote such stock, to any person who has the sole power to sell such stock, and to any person who has the right to revoke the trust at will or to replace the trustee at will. If the trustee has a familial, personal or extra-trust business relationship to the grantor or the beneficiary, the grantor or beneficiary, as appropriate, will be attributed with the stock interests held in trust. An otherwise qualified trust will be ineffective to insulate the grantor or beneficiary from attribution with the trust's assets unless all voting stock interests held by the grantor or beneficiary in the relevant broadcast licensee or cable television system are subject to said trust.

(f) Holders of non-voting stock shall not be attributed an interest in the issuing entity. Holders of debt and instruments such as warrants, convertible debentures, options or other non-voting interests with rights of conversion to voting interests shall not be attributed unless and until conversion is effected.

(g)(1) A limited partnership interest shall be attributed to a limited partner unless that partner is not materially involved, directly or indirectly, in the management or operation of the media-related activities of the partnership and the licensee or system so certifies.

(2) In order for a licensee or system to make the certification set forth in paragraph (g)(1) of this section, it must verify that the partnership agreement or certificate of limited partnership, with respect to the particular limited partner exempt from attribution, establishes that the exempt limited partner has no material involvement, directly or indirectly, in the management or operation of the media activities of the partnership. The criteria which would assure adequate insulation for purposes of this certification are described in the *Memorandum Opinion and Order* in MM Docket No. 83-46, FCC 85-252 (released June 24, 1985) as modified on reconsideration in the *Memorandum Opinion and Order* in MM Docket No. 83-46, FCC 86-410 (released November 28, 1986). Irrespective of the terms of the certificate of limited partnership or partnership agreement, however, no such certification shall be made if the individual or entity making the certification has actual knowledge of any material involvement of the limited partners in the management or operation of the media-related businesses of the partnership.

(h) Officers and directors of a broadcast licensee or cable television system are considered to have a cognizable interest in the entity with which they are so associated. If any such entity engages in businesses in addition to its primary business of broadcasting or cable television service, it may request the Commission to waive attribution for any officer or director whose duties and responsibilities are wholly unrelated to its primary business. The officers and directors of a parent company of a broadcast licensee or cable television system, with an attributable interest in any such subsidiary entity, shall be deemed to have a cognizable interest in the subsidiary unless the duties and responsibilities of the officer or director involved are wholly unrelated to the broadcast licensee or cable television system subsidiary, and a statement properly documenting this fact is submitted to the Commission. [This statement may be included on the appropriate Ownership Report]. The officers and directors of a sister corporation of a broadcast licensee or cable television system shall not be attributed with ownership of these entities by virtue of such status.

(i) Discrete ownership interests will be aggregated in determining whether or not an interest is cognizable under this section. An individual or entity will be deemed to have a cognizable investment if:

(1) The sum of the interests held by or through "passive investors" is equal to or exceeds 10 percent; or

(2) The sum of the interests other than those held by or through "passive investors" is equal to or exceeds 5 percent; or

(3) The sum of the interests computed under paragraph (i)(1) of this section plus the sum of the interests computed under paragraph (i)(2) of this section is equal to or exceeds 10 percent.

NOTE 3: In cases where record and beneficial ownership of voting stock is not identical (*e.g.*, bank nominees holding stock as record owners for the benefit of mutual funds, brokerage houses holding stock in street names for the benefit of customers, investment advisors holding stock in their own names for the benefit of clients, and insurance companies holding stock), the party having the right to determine how the stock will be voted will be considered to own it for purposes of these rules.

NOTE 4: Paragraph (a)(2) of this section will not be applied so as to require the divestiture of ownership interests proscribed herein solely because of the transfer of such interests to heirs or legatees by will or intestacy, provided that the degree or extent of the proscribed cross-ownership is not increased by such transfer.

(b) *Effective date.* (1) The provisions of paragraphs (a) (1) and (3) of this section are not effective until August 10, 1975, as to ownership interests proscribed herein if such interests were in existence on or before July 1, 1970 (*e.g.*, if a franchise were in existence on or before July 1, 1970): *Provided, however,* That the provisions of paragraph (a) of this section are effective on August 10, 1970, as to such interests acquired after July 1, 1970.

(2) The provisions of paragraph (a)(2) of this section are not effective until November 8, 1987, as to ownership interests proscribed herein if such interests were in existence on or before July 1, 1970 (e.g., if franchise were in existence on or before July 1970), and will be applied to cause divestiture as to ownership interests proscribed herein only where the cable system is directly or indirectly, owned, operated, controlled by, or has an interest in a non-satellite television broadcast station which places a principal community contour encompassing the entire community and there is no other commercial non-satellite television broadcast station placing a principal community contour encompassing the entire community.

[37 FR 3278, Feb. 12, 1972, as amended at 40 FR 44554, Sept. 29, 1975; 47 FR 21503, May 18, 1982; 49 FR 19499, May 8, 1984; 49 FR 23354, June 6, 1984; 49 FR 48314, Dec. 12, 1984; 50 FR 27451, July 3, 1985; 50 FR 40016, Oct. 1, 1985; 52 FR 1632, Jan. 15, 1987]

Subpart K—Technical Standards

§ 76.601 Performance tests.

(a) The operator of each cable television system shall be responsible for insuring that each such system is designed, installed, and operated in a manner that fully complies with the provisions of this subpart. Each system operator shall be prepared to show, on request by an authorized representative of the Commission, that the system does, in fact, comply with the rules.

(b) All cable television systems serving 1,000 or more subscribers, and all cable television systems serving less than 1,000 subscribers that use any frequency spectrum other than that allocated to over-the-air broadcasting (as described in §§ 73.603 and 73.210), shall conduct all tests, measurements and monitoring of radiation and signal leakage to demonstrate compliance with the radiation limits set forth in § 76.605(a)(11) as follows:

(1) The Cable system operator shall conduct signal leakage measurements in accordance with §76.609(h) at least once each calendar year (at intervals not to exceed 14 months) and shall maintain the resulting test data on file at the operator's local business office for at least five (5) years. It shall be made available for inspection by the Commission on request. This data shall include a description of instruments and procedure and a statement of the qualification of the person performing the tests.

(2) Successful completion of the performance tests does not relieve the system of the obligation to comply with all other pertinent technical standards set forth in this subpart. Additional or repeat tests may be required by the Commission in order to secure compliance with these standards.

NOTE: Requirements for performing tests to determine compliance with the standards of § 76.605(a)(9), insofar as it relates to the ratio of visual signal level to any undesired cochannel television signal, and (a)(10) are hereby suspended for all cable television systems, pending further action by the Commission.

[37 FR 3278, Feb. 12, 1972, as amended at 42 FR 27182, Apr. 29, 1977; 50 FR 52466, Dec. 24, 1985]

§ 76.605 Technical standards.

(a) The following requirements apply to the performance of a cable television system as measured at any subscriber terminal with a matched termination, and to each of the Class I cable television channels in the system:

(1) The frequency boundaries of cable television channels delivered to subscriber terminals shall conform to those set forth in § 73.603(a) of this chapter: *Provided, however,* That on special application including an adequate showing of public interest, other channel arrangements may be approved.

(2) If no frequency converter is supplied to the subscriber the visual carrier frequency shall be maintained 1.25 MHz±25kHz above the lower frequency boundary of the cable television channel If a frequency converter is supplied to the subscriber by the cable television system, the following requirement shall be applied at the interface between the converter and the subscriber's terminal equipment: when the visual carrier at the output of the converter has been tuned to a frequency 1.25 MHz above the lower frequency boundary of a cable television channel with the converter stabilized at an ambient temperature between 20°C and 25°C, the frequency of the visual carrier shall not vary more than ±250 kHz for a period of at least three hours, during which period the ambient temperature may vary ±5°C about the initial ambient temperature.

NOTE: A relaxed frequency tolerance will be permitted when both of the following conditions are met: (a) The signal is received by means of a television broadcast translator station, and (b) the cable television system carries signals on neither an upper nor a lower channel adjacent in frequency to the channel on which the translator signal is carried. In such cases, the visual carrier frequency shall be maintained 1.25 MHz ±(25+T) kHz above the lower frequency boundary of the cable television channel, where T is the frequency tolerance in kHz allowed the television broadcast translator station pursuant to § 74.761 of this chapter.

(3) The aural center frequency of the aural carrier must be 4.5 MHz±5 kHz above the frequency of the visual carrier.

(4) The visual signal level, across a terminating impedance which correctly matches the internal impedance of the cable system as viewed from the subscriber terminals, shall be not less than the following appropriate value:

Internal impedance:
75 ohms.
300 ohms.
Visual signal level:
1 millivolt.
2 millivolts.

(At other impedance values, the minimum visual signal level shall be $\sqrt{0.0133Z}$ millivolts, where Z is the appropriate impedance value.)

(5) The visual signal level on each channel shall not vary more than 12 decibels within any 24-hour period, and shall be maintained within:

(i) 3 decibels of the visual signal level of any visual carrier within 6 MHz nominal frequency separation, and

(ii) 12 decibels of the visual signal level on any other channel, and

(iii) A maximum level such that signal degradation due to overload in the subscriber's receiver does not occur.

(6) The peak-to-peak variation in visual signal level caused by undesired low frequency disturbances (hum or repetitive transients) generated within the system, or by inadequate low frequency response, shall not exceed 5 percent of the visual signal level.

(7) The amplitude characteristic shall be within a range of ±2 decibels from 0.75 MHz to 5.0 MHz above the lower boundary frequency of the cable television channel, referenced to the average of the highest and lowest amplitudes within these frequency boundries.

(8) The ratio of visual signal level to system noise, and of visual signal level to any undesired co-channel television signal operating on proper offset assignment, shall not be less than 36 decibels. This requirement is applicable to:

(i) Each signal which is delivered by a cable television system to subscribers within the predicted Grade B contour for that signal, or

(ii) Each signal which is first picked up within its predicted Grade B contour, or

(iii) Each signal that is first received by the cable television system by direct video feed from a TV broadcast station or a low power TV station.

(9) The ratio of visual signal level to the rms amplitude of any coherent disturbances such as intermodulation products or discrete-frequency interfering signals not operating on proper offset assignments shall not be less than 46 decibels.

(10) The terminal isolation provided each subscriber shall be not less than 18 decibels, but in any event, shall be sufficient to prevent reflections caused by open-circuited or short-circuited subscriber terminals from producing visible picture impairments at any other subscriber terminal.

(11) As an exception to the general provision requiring measurements to be made at subscriber terminals, and without regard to the class of cable television channel involved, radiation from a cable television system shall be measured in accordance with procedures outlined in § 76.609(h), and shall be limited as follows:

Frequencies	Radiation limit (microvolts/meter)	Distance (feet)
Up to and including 54 MHz	15	100
Over 54 up to and including 216 MHz	20	10
Over 216 MHz	15	100

(b) Cable television systems distributing signals by using multiple cable techniques or specialized receiving devices, and which, because of their basic design, cannot comply with one or more of the technical standards set forth in paragraph (a) of this section, may be permitted to operate provided that an adequate showing is made which establishes that the public interest is benefited. In such instances the Commission may prescribe special technical requirements to ensure that subscribers to such systems are provided with a good quality of service.

NOTE 1: The requirements of §§ 76.605(a)(1) through 76.605(a)(10) do not apply directly to cable systems. These rule sections or less stringent versions of them may be used as standards by state or local regulatory authorities. No technical parameter in excess of the above rule sections may be required.

NOTE 2: The requirements of this section shall not apply to devices subject to the provisions of §§ 15.601 through 15.626.

[37 FR 3278, Feb. 12, 1972, as amended at 37 FR 13867, July 14, 1972; 40 FR 2690, Jan. 15, 1975; 40 FR 3296, Jan. 21, 1975; 41 FR 53028, Dec. 3, 1976; 42 FR 21782, Apr. 29, 1977; 47 FR 21503, May 18, 1982; 50 FR 52466, Dec. 24, 1985; 51 FR 1255, Jan. 10, 1986; 52 FR 22461, June 12, 1987]

§ 76.609 Measurements.

(a) Measurements made to demonstrate conformity with the performance requirements set forth in §§ 76.601 and 76.605 shall be made under conditions which reflect system performance during normal operations, including the effect of any microwave relay operated in the Cable Television Relay (CARS) Service intervening between pickup antenna and the cable distribution network. Amplifiers shall be operated at normal gains, either by the insertion of appropriate signals or by manual adjustment. Special signals inserted in a cable television channel for measurement purposes should be operated at levels approximating those used for normal operation. Pilot tones, auxiliary or substitute signals, and nontelevision signals normally carried on the cable television system should be operated at normal levels to the extent possible. Some exemplary, but not mandatory, measurement procedures are set forth in this section.

(b) When it may be necessary to remove the television signal normally carried on a cable television channel in order to facilitate a performance measurement, it will be permissible to disconnect the antenna which serves the channel under measurement and to substitute therefor a matching resistance termination. Other antennas and inputs should remain connected and normal signal levels should be maintained on other channels.

(c) As may be necessary to ensure satisfactory service to a subscriber, the Commission may require additional tests to demonstrate system performance or may specify the use of different test procedures.

(d) The frequency response of a cable television channel may be determined by one of the following methods, as appropriate:

(1) By using a swept frequency or a manually variable signal generator at the sending end and a calibrated attenuator and frequency-selective voltmeter at the subscriber terminal; or

(2) By using a multiburst generator and modulator at the sending end and a demodulator and oscilloscope display at the subscriber terminal.

(e) System noise may be measured using a frequency-selective voltmeter (field strength meter) which has been suitably calibrated to indicate rms noise or average power level and which has a known bandwidth. With the system operating at normal level and with a properly matched resistive termination substituted for the antenna, noise power indications at the subscriber terminal are taken in successive increments of frequency equal to the bandwidth of the frequency-selective voltmeter, summing the power indications to obtain the total noise power present over a 4 MHz band centered within the cable television channel. If it is established that the noise level is constant within this bandwidth, a single measurement may be taken which is corrected by an appropriate factor representing the ratio of 4 MHz to the noise bandwidth of the frequency-selective voltmeter. If an amplifier is inserted between the frequency-selective voltmeter and the subscriber terminal in order to facilitate this measurement, it should have a bandwidth of at least 4 MHz and appropriate corrections must be made to account for its gain and noise figure. Alternatively, measurements made in accordance with the NCTA standard on noise measurement (NCTA Standard 005-0669) may be employed.

(f) The amplitude of discrete frequency interfering signals within a cable television channel may be determined with either a spectrum analyzer or with a frequency-selective voltmeter (field strength meter), which instruments have been calibrated for adequate accuracy. If calibration accuracy is in doubt, measurements may be referenced to a calibrated signal generator, or a calibrated variable attenuator, substituted at the point of measurement. If an amplifier is used between the subscriber terminal and the measuring instrument, appropriate corrections must be made to account for its gain.

(g) The terminal isolation between any two terminals in the system may be measured by applying a signal of known amplitude to one and measuring the amplitude of that signal at the other terminal. The frequency of the signal should be close to the midfrequency of the channel being tested. Annual measurements of terminal isolation are not required when either (1) the manufacturer's specifications for coupler directivity or (2) laboratory measurements on a representative sample of the couplers, plus an allowance for the attenuation of drop cables, indicate that the requirements of § 76.605(a)(11) are met.

(h) Measurements to determine the field strength of radio frequency energy radiated by cable television systems shall be made in accordance with standard engineering procedures. Measurements made on frequencies above 25 MHz shall include the following:

(1) A field strength meter of adequate accuracy using a horizontal dipole antenna shall be employed.

(2) Field strength shall be expressed in terms of the rms value of synchronizing peak for each cable television channel for which radiation can be measured.

(3) The resonant half wave dipole antenna shall be placed 3 meters from and positioned directly below the system components and at 3 meters above ground. Where such placement results in a separation of less than 3 meters between the center of the dipole antenna and the system components, or less than 3 meters between the dipole and ground level, the dipole shall be repositioned to provide a separation of 3 meters from the system components at a height of 3 meters or more above ground.

(4) The horizontal dipole antenna shall be rotated about a vertical axis and the maximum meter reading shall be used.

(5) Measurements shall be made where other conductors are 10 or more feet away from the measuring antenna

(i) Annual measurements of frequency stability of set top converters, when such converters are supplied by the cable television operator, are not required when either of the following indicates that the requirements of § 76.605(a)(2) are met: (1) Manufacturer's specifications based on a representative sample of the converters, or (2) laboratory tests performed by or for the cable television system operator on a representative sample of the converters. Proof of performance tests for frequency stability will not be required for converters ordered from the manufacturer prior to September 6, 1977.

[37 FR 3278, Feb. 12, 1972, as amended at 37 FR 13867, July 14, 1972; 41 FR 10067, Mar. 9, 1976; 42 FR 21782, Apr. 29, 1977; 49 FR 45441, Nov. 16, 1984]

§ 76.610 Operation in the frequency bands 108-137 and 225-400 MHz—Scope of application.

The provisions of §§ 76.611 (effective July 1, 1990), 76.612, 76.613, 76.614 and 76.615 are applicable to all cable television systems transmitting carriers or other signal components carried at an average power level equal to or greater than 10^{-4} watts across a 25 kHz bandwidth in any 160 microsecond period, at any point in the cable distribution system in the frequency bands 108-137 and 225-400 MHz for any purpose. For grandfathered systems, refer to §§ 76.618 and 76.619.

Note 1: See the provisions of § 76.616 for cable operation near certain aeronautical and marine emergency radio frequencies.

Note 2: Until January 1, 1990, the band 136-137 MHz is allocated as an alternative allocation to the space operation, meteorological-satellite service and the space research service on a primary basis. After January 1, 1990, the space service will become secondary to aeronautical mobile service radio. Until January 1, 1990, the band 136 to 137 MHz is excluded from the rule sections regarding protection of aeronautical frequencies.

[50 FR 29399, July 19, 1985]

§ 76.611 Cable television basic signal leakage performance criteria.

(a) No cable television system shall commence or provide service in the frequency bands 108-137 and 225-400 MHz unless such systems is in compliance with one of the following ca television basic signal leakage p formance criteria:

(1) prior to carriage of signals in t aeronautical radio bands and at le once each calendar year, with no mo than 12 months between success tests thereafter, based on a sampli of at least 75% of the cable strand, a including any portion of the ca system which are known to have can reasonably be expected to ha less leakage integrity than the avera of the system, the cable operator de onstrates compliance with a cumu tive signal leakage index by show either that (i) 10 log I_{3000} is equal to less than −7 or (ii) 10 log I_{∞} is equal or less than 64, using one of the f lowing formula:

$$I_{3000} = \frac{1}{\emptyset} \sum_{i=1}^{n} \frac{E_i^2}{R_i^2}$$

$$I_{\infty} = \frac{1}{\emptyset} \sum_{i=1}^{n} E_i^2$$

where:

$$R_i^2 = r_i^2 + (3000)^2$$

r_i is the distance (in meters) between leakage source and the center of cable television system;

θ is the fraction of the system cable len actually examined for leakage sou and is equal to the strand miles of p tested divided by the total strand m in the plant;

R_i is the slant height distance (in met from leakage source i to a point meters above the center of the cable evision system;

E_i is the electric field strength in microv per meter (μV/m) measured pursuan § 76.609(h) 3 meters from the leak i;

n is the number of leaks found of strength equal to or greater than 50 m pursuant to Section 76.609(h).

The sum is carried over all leaks i dete in the cable examined; or

(2) prior to carriage of signals in the aeronautical radio bands and at least once each calendar year, with no more than 12 months between successive tests thereafter, the cable operator demonstrates by measurement in the airspace that at no point does the field strength generated by the cable system exceed 10 microvolts per meter (μV/m) RMS at an altitude of 450 meters above the average terrain of the cable system. The measurement system (including the receiving antenna) shall be calibrated against a known field of 10 μV/m RMS produced by a well characterized antenna consisting of orthogonal reasonant dipoles, both parallel to and one quarter wavelength above the ground plane of a diameter of two meters or more at ground level. The dipoles shall have centers collocated and be excited 90 degrees apart. The half-power bandwidth of the detector shall be 25 kHz. If an aeronautical receiver is used for this purpose it shall meet the standards of the Radio Technical Commission for Aeronautics (RCTA) for aeronautical communications receivers. The aircraft antenna shall be horizontally polarized. Calibration shall be made in the community unit or, if more than one, in any of the community units of the physical system within a reasonable time period to performing the measurements. If data is recorded digitally the 90th percentile level of points recorded over the cable system shall not exceed 10 μV/m RMS; if analog recordings is used the peak values of the curves, when smoothed according to good engineering practices, shall not exceed 10 μV/m RMS.

(b) In paragraphs (a)(1) and (a)(2) of this section the unmodulated test signal used on the cable plant shall: (1) Be within the VHF aeronautical band 108–137 MHz or any other frequency in which the results can be correlated to the VHF aeronautical band and (2) have an average power level equal to the average power level of the strongest cable television carrier on the system.

(c) In paragraph (a)(1) and (2) of this section, if a modulated test signal is used, the test signal and detector technique must, when considered together, yield the same result as though an unmodulated test signal were used in conjunction with a detection technique which would yield the RMS value of said unmodulated carrier.

(d) If a sampling of at least 75% of the cable strand (and including any portions of the cable system which are known to have or can reasonably be expected to have less leakage integrity than the average of the system) as described in paragraph (a)(1) cannot be obtained by the cable operator or is otherwise not reasonably feasible, the cable operator shall perform the airspace measurements described in paragraph (a)(2).

(e) Prior to providing service to any subscriber on a new section of cable plant, the operator shall show compliance with either: (1) The basic signal leakage criteria in accordance with paragraph (a)(1) or (a)(2) of this section for the entire plant in operation or (2) a showing shall be made indicating that no individual leak in the new section of the plant exceeds 20 μV/m at 3 meters in accordance with § 76.609 fo the Rules.

(f) Notwithstanding paragraph (a) of this section, a cable operator shall be permitted to operate on any frequency which is offset pursuant to § 76.612 in the frequency band 108–137 MHz for the purpose of demonstrating compliance with the cable television basic signal leakage performance criteria.

[50 FR 29399, July 19, 1985, as amended at 53 FR 2499, Jan. 28, 1988; 53 FR 5684, Feb. 25, 1988]

§ 76.612 Cable television frequency separation standards.

All cable television systems which operate in the frequency bands 108–137 and 225–400 MHz shall comply with the following frequency separation standards:

(a) In the aeronautical radiocommunication bands 118–137, 225–328.6 and 335.4–400 MHz, the frequency of all carrier signals or signal components carried at an average power level equal to or greater than 10^{-4} watts in a 25 kHz bandwidth in any 160 microsecond period must operate at frequencies offset from certain frequencies which may be used by aeronautical radio services operated by Commission licensees or by the United States Government or its Agencies. The aeronautical frequencies from which offsets must be maintained are those frequencies which are within one of the aeronautical bands defined in this subparagraph, and when expressed in MHz and divided by 0.025 yield an integer. The offset must meet one of the following two criteria:

(1) All such cable carriers or signal components shall be offset by 12.5 kHz with a frequency tolerance of ±5 kHz; or

(2) The fundamental frequency from which the visual carrier frequencies are derived by multiplication by an integer number which shall be 6.0003 MHz with a tolerance of ±1 Hz (Harmonically Related Carrier (HRC) comb generators only).

(b) In the aeronautical radionavigation bands 108-118 and 328.6-335.4 MHz, the frequency of all carrier signals or signal components carrier at an average power level equal to or greater than 10^{-4} watts in a 25 kHz bandwidth in any 160 microsecond period shall be offset by 25 kHz with a tolerance of ±5 kHz. The aeronautical radionavigation frequencies from which offsets must be maintained are defined as follows:

(1) Within the aeronautical band 108-118 MHz when expressed in MHz and divided by 0.025 yield an even integer.

(2) Within the band 328.6-335.4 MHz, the radionavigation glide path channels are listed in Section 87.501 of the Rules.

NOTE: The HRC system, as described above, will meet this requirement in the 328.6-335.4 MHz navigation glide path band. Those Incrementally Related Carriers (IRC) systems, with comb generator reference frequencies set at certain odd multiples equal to or greater than 3 times the 0.0125 MHz aeronautical communications band offset, e.g. (6n + 1.250 ± 0.0375) MHz, may also meet the 25 kHz offset requirement in the navigation glide path band.

[50 FR 29400, July 19, 1985]

§ 76.613 Interference from a cable telev
sion system.

(a) Harmful interference is any emi
sion, radiation or induction which e
dangers the functioning of a radi
navigation service or of other safe
services or seriously degrades, o
structs or repeatedly interrupts a r
diocommunication service operating
accordance with this chapter.

(b) The operator of a cable televisio
system that causes harmful interfe
ence shall promptly take appropria
measures to eliminate the harmful i
terference.

(c) If harmful interference to rad
communications involving the safe
of life and protection of proper
cannot be promptly eliminated by t
appliciation of suitable techniques, o
eration of the offending cable tele
sion system or appropriate elemen
thereof shall immediately be suspen
ed upon notification by the Engine
in Charge (EIC) of the Commissio
local field office, and shall not be
sumed until the interference has be
eliminated to the satisfaction of t
EIC. When authorized by the E
short test operations may be ma
during the period of suspended op
ation to check the efficacy of remed
measures.

(d) The cable television system op
ator may be required by the EIC
prepare and submit a report regardi
the cause(s) of the interference, c
rective measures planned or tak
and the efficacy of the remedial me
ures.

(Secs. 1, (302); (82 Stat. 290); 47 U.S.C.
302)

[42 FR 41296, Aug. 16, 1977]

§ 76.614 Cable television system reg
monitoring.

Cable television operators transn
ting carriers in the frequency ba
108-137 and 225-400 MHz shall p
vide for a program of regular monit
ing for signal leakage by substanti
covering the plant every th
months. The incorporation of t
monitoring program into the daily
tivities of existing service personne
the discharge of their normal du
will generally cover all portions of
system and will therefore meet this

quirement. Monitoring equipment and procedures utilized by a cable operator shall be adequate to detect a leakage source which produces a field strength in these bands of 20 μV/m or greater at a distance of 3 meters. During regular monitoring, any leakage source which produces a field strength of 20 μV/m or greater at a distance of 3 meters in the aeronautical radio frequency bands shall be noted and such leakage sources shall be repaired within a reasonable period of time. The operator shall maintain a log showing the date and location of each leakage source identified, the date on which the leakage was repaired, and the probable cause of the leakage. The log shall be kept on file for a period of two (2) years and shall be made available to authorized representatives of the Commission upon request.

[50 FR 29400, July 19, 1985]

§ 76.615 Notification requirements.

All cable television operators shall comply with each of the following notification requirements:

(a) The operator of the cable system shall notify the Commission annually of all signals carried in the aeronautical radio frequency bands, noting the type of information carried by the signal (television picture, aural, pilot carrier, or system control, etc.) The timely filing of FCC Form 325, Schedule 2, will meet this requirement.

(b) The operator of a cable system shall notify the Commission before transmitting any carrier or other signal component with an average power level across a 25 kHz bandwidth in any 160 microsecond time period equal to or greater than 10^{-4} watts at any point in the cable distribution system on any new frequency or frequencies in the aeronautical radio frequency bands. Such notification shall include:

(1) Legal name and local address of the cable television operator;

(2) The names and FCC identifiers (e.g. CA0001) of the system communities affected;

(3) The names and telephone numbers of local system officials who are responsible for compliance with §§ 76.610, 76.611 (effective July 1, 1990), and 76.612 through 76.616 of the Rules;

(4) Carrier and subcarrier frequencies and tolerance, types of modulation and the maximum average power levels of all carriers and subcarriers occurring at any location in the cable distribution system.

(5) The geographical coordinates of a point near the center of the cable system, together with the distance (in kilometers) from the designated point to the most remote point of the cable plant, existing or planned, which defines a circle enclosing the entire cable plant;

(6) A description of the routine monitoring procedure to be used; and

(7) For cable operators subject to § 76.611 (effective July 1, 1990), the cumulative signal leakage index derived under § 76.611(a)(1) (effective July 1, 1990) or the results of airspace measurements derived under § 76.611(a)(2) (effective July 1, 1990), including a description of the method by which compliance with basic signal leakage criteria is achieved and the method of calibrating the measurement equipment. This information shall be provided to the Commission prior to July 1, 1990 and each calendar year thereafter.

[50 FR 29400, July 19, 1985]

§ 76.616 Operation near certain aeronautical and marine emergency radio frequencies.

The transmission of carriers or other signal components capable of delivering peak power levels equal to or greater than 10^{-5} watts at any point in a cable television system is prohibited within 100 kHz of the frequency 121.5 MHz, and is prohibited withn 50 kHz of the two frequencies 156.8 MHz and 243.0 MHz.

[50 FR 29401, July 19, 1985]

§ 76.617 Responsibility for interference.

Interference resulting from the use of cable system terminal equipment (including subscriber terminal, input selector switch and any other accessories) shall be the responsibility of the cable system terminal equipment operator in accordance with the provisions of part 15 of this chapter: provided, however, that the operator of a cable system to which the cable system terminal equipment is connected shall be responsible for detecting and eliminating any signal leakage where that leakage would cause interference outside the subscriber's premises and/or would cause the cable system to exceed the Part 76 signal leakage requirements. In cases where excessive signal leakage occurs, the cable operator shall be required only to discontinue service to the subscriber until the problem is corrected.

[53 FR 46619, Nov. 18, 1989]

§ 76.618 Grandfathering.

Cable television systems are permitted to use aeronautical frequencies which were requested or granted for use by November 30, 1984, under Section 76.619 of the Rules unitl July 1, 1990.

[50 FR 29401, July 19, 1985]

§ 76.619 Grandfathered Operation in the frequency bands 108-136 and 225-400 MHz.

All cable television systems operating in a grandfathered status under § 76.618 of the Rules and transmitting carriers or other signal components capable of delivering peak power equal to or greater than 10^{-5} watts at any point in the cable system in the frequency bands 108-136 and 225-400 MHz for any purpose are subject to the following requirements:

(a) The operator of the cable system shall notify the Commission annually of all signals carried in these bands, noting the type of information carried by the signal (television, aural, or pilot carrier and system control, etc.). The timely filing of FCC Form 325, Schedule 2, will meet this requirement.

(b) The operator of the cable system shall notify the Commission of the proposed extension of the system radius in these bands. Notification shall include carrier and subcarrier frequencies, types of modulation, the previously notified geographical coordinates, the new system radius and the maximum peak power occurring at any location in the cable distribution system. No system shall extend its radius in these bands without prior Commission authorization.

(c) The operator of the cable system shall maintain at its local office a current listing of all signals carried in these bands, noting carrier and subcarrier frequencies, types of modulation, and maximum peak power which occurs at any location within the cable distribution system.

(d) The operator of the system shall provide for regular monitoring of the cable system for signal leakage covering all portions of the cable system at least once each calendar year. Monitoring equipment and procedures shall be adequate to detect leakage sources which produce field strengths in these bands of 20 microvolts per meter at a distance of 3 meters. The operator shall maintain a log showing the date and location of each leakage source identified, the date on which the leakage was eliminated, and the probable cause of the leakage. The log shall be kept on file for a period of two (2) years, and shall be made to authorized representatives of the Commission on request.

(e) All carrier signals or signal components capable of delivering peak power equal to or greater than 10^{-5} watts must be operated at frequencies offset from aeronautical radio services operated by Commission licensees or by the United States Government or its agencies within 111 km (60 nautical miles) of any portion of the cable system as given in paragraph (f) of this section. (The limit of 111 km may be increased by the Commission in cases of "extended service volumes" as defined by the Federal Aviation Administration or other federal government agency for low altitude radio navigation or communication services). If an operator of a cable system is notified by the Commission that a change in operation of an aeronautical radio service will place the cable system in conflict with any of the offset criteria, the cable system operator is responsible for eliminating such conflict within 30 days of notification.

(f) A minimum frequency offset between the nominal carrier frequency of an aeronautical radio service qualifying under paragraph (d) of this Section and the nominal frequency of any cable system carrier or signal component capable of delivering peak power equal to or greater than 10^{-5} watts shall be maintained or exceeded at all times. The minimum frequency offsets are as follows:

Frequencies	Minimun frequency offsets
108-118 MHz	(50 + T) kHz
328.6-335.4 MHz	
108-136 MHz	(100 + T) kHz
225-328.6 MHz	
335.4-400 MHz	

In this table, T is the absolute value of the frequency tolerance of the cable television signal. The actual frequency tolerance will depend on the equipment and operating procedures of the cable system, but in no case shall the frequency tolerance T exceed ±25 kHz in the bands 108-136 and 225-400 MHz.

[50 FR 29401, July 19, 1985]

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[50 FR 38536, Sept. 23, 1985; 50 FR 39114 Sept. 27, 1985, as amended at 51 FR 34622 Sept. 30, 1986; 52 FR 37316, Oct. 6, 1987]

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AUTHORITY: Secs. 2, 3, 4, 301, 303, 307, 308, 309, 48 Stat., as amended, 1064, 1065, 1066, 1081, 1082, 1083, 1084, 1085; 47 U.S.C. 152, 153, 154, 301, 303, 307, 308, 309.

SOURCE: 37 FR 3292, Feb. 12, 1972, unless otherwise noted.

Subpart A—General

§ 78.1 Purpose.

The rules and regulations set forth in this part provide for the licensing and operation of fixed or mobile cable television relay service stations (CARS) used for the transmission of television and related audio signals, signals of standard and FM broadcast stations, signals of instructional television fixed stations, and cablecasting from the point of reception to a terminal point from which the signals are distributed to the public by cable. In addition CARS stations may be used to transmit television and related audio signals to TV translator and low power TV stations.

[43 FR 1952, Jan. 13, 1978, as amended at 47 FR 21503, May 18, 1982]

§ 78.3 Other pertinent rules.

Other pertinent provisions of the Commission's rules and regulations relating to the cable television relay service (CARS) are included in the following parts of this chapter:

Part 0—Commission Organization.

Part 1—Practice and Procedure.

Part 2—Frequency Allocations and Radio Treaty matters; General Rules and Regulations.

Part 17—Construction Marking and Lighting of Antenna Structures.

Part 74—Experimental, Auxiliary, and Special Broadcast, and other Program Distribution Services.

Part 76—Cable Television Service

[43 FR 1952, Jan. 13, 1978]

§ 78.5 Definitions.

For purposes of this part, the following definitions are applicable. For other definitions, see part 76 (Cable Television Service) of this chapter.

(a) *Cable television relay service (CARS) station.* A fixed or mobile station used for the transmission of television and related audio signals, signals of standard and FM broadcast stations, signals of instructional television fixed stations, and cablecasting from the point of reception to a terminal point from the point of reception to a terminal point from which the signals are distributed to the public.

NOTE: Except where the rules contained in this part make separate provision, the term "Cable Television Relay service" or "CARS" includes the term "Local Distribution Service" or "LDS," the term "Cable Television Relay service Studio to Headend Link" or "SHL," and the term "Cable Television Relay PICKUP," as defined in paragraphs (b), (c), and (d) of this section.

(b) *Local distribution service (LDS) station.* A fixed CARS station used within a cable television system or systems for the transmission of television signals and related audio signals, signals of standard and FM broadcast stations, signals of instructional television fixed stations, and cablecasting from a local transmission point to one or more receiving points, from which the communications are distributed to the public. LDS stations may also engage in repeatered operation.

(c) *Cable Television Relay Service Studio to Headend Link (SHL) station.* A fixed CARS station used for the transmission of television program material and related communications from a cable television studio to the headend of a cable television system.

(d) *Cable Television Relay Service PICKUP station.* A land mobile CARS station used for the transmission of television signals and related communications from the scenes of events occurring at points removed from cable television studios to cable television studios or headends.

(e) *Remote control operation.* Operation of a station by a qualified operator on duty at a control position from which the transmitter is not visible but which control position is equipped with suitable control and telemetering circuits so that the essential functions that could be performed at the transmitter can also be performed from the control point.

(f) *Attended operation.* Operation of a station by a qualified operator on duty at the place where the transmitting apparatus is located with the transmitter in plain view of the operator.

(g) *Unattended operation.* Operation of a station by automatic means whereby the transmitter is turned on and off and performs its functions without attention by a qualified operator.

(h) *Authorized bandwidth.* The maximum bandwidth authorized to be used by a station as specified in the station license. (See §§ 2.202 and 78.104.)

(i) *Cable network-entity.* A cable network-entity is an organization which produces programs available for simultaneous transmission by cable systems serving a combined total of at least 5,000,000 subscribers and having distribution facilities or circuits available to such affiliated stations or cable systems.

[37 FR 3292, Feb. 12, 1972, as amended at 38 FR 16647, June 25, 1973; 39 FR 26025, July 16, 1974; 43 FR 1953, Jan. 13, 1978; 52 FR 7143, Mar. 9, 1987]

Subpart B—Applications and Licenses

§ 78.11 Permissible service.

(a) CARS stations are authorized to relay TV broadcast and low power TV and related audio signals, the signals of AM and FM broadcast stations, signals of instructional TV fixed stations, and cablecasting intended for use by one or more cable television systems. LDS stations are authorized to relay television broadcast and related audio signals, the signals of AM and FM broadcast stations signals of instructional television fixed stations, cablecasting, and such other communications as may be authorized by the Commission. Relaying includes retransmission of signals by intermediate relay stations in the system. CARS licensees may interconnect their facilities with those of other CARS, common carrier, or television auxiliary licensees, and may also retansmit the signals of such CARS, common carrier, or television auxiliary stations, provided that the program material retransmitted meets the requirements of this paragraph.

(b) The transmitter of a CARS station using FM transmission may be multiplexed to provide additional communication channels for the transmission of standard and FM broadcast station programs and operational communications directly related to the technical operation of the relay system (including voice communications, telemetry signals, alerting signals, fault reporting signals, and control signals). A CARS station will be authorized only where the principal use is the transmission of television broadcast program material or cablecasting: *Provided, however,* That this requirement shall not apply to LDS stations.

(c) CARS station licenses may be issued to cable television owners or operators and to cooperative enterprises owned by cable television owners or operators. Television translator licensees may be members of such cooperative enterprises.

(d) CARS systems shall supply program material to cable television systems and translator stations only in the following circumstances.

(1) Where the licensee of the CARS station or system is owner or operator of the cable television systems supplied with program material; or

(2) Where the licensee of the CARS station or system supplies program material to cable television systems or television translator stations either without charge or on a non-profit, cost-sharing basis pursuant to a written contract between the parties involved which provides that the CARS licensee shall have exclusive control over the operation of the CARS stations licensed to him and that contributions to capital and operating expenses are accepted only on a cost-sharing, nonprofit basis, prorated on an equitable basis among all cable television systems being supplied with program material in whole or in part. Changes for the programming material are not subject to this restriction and cable network-entities may fully charge for their services. Records showing the cost of the service and its nonprofit, cost-sharing nature shall be maintained by the CARS licensee and held available for inspection by the Commission.

(e) The license of a CARS pickup station authorizes the transmission of program material, and related communications necessary to the accomplishment of such transmission, from the scenes of events occurring in places other than a cable television studio, to the studio or headend of its associated cable television system, or to such other cable television systems as are carrying the same program material. CARS pickup stations may be used to provide temporary CARS Studio-to-Headend Links or CARS circuits consistent with this part without further authority of the Commission: *Provided, however*, That prior Commission authority shall be obtained if the transmitting antenna to be installed will increase the height of any natural formation or manmade structure by more than 20 feet and will be in existence for a period of more than 2 consecutive days: *And provided, further*, That if the transmitting equipment is to be operated for more than 1 day outside of the area to which the CARS station has been licensed, the Commission, the Engineer in charge of the district in which the station is licensed to operate, and the Engineer in charge of the district in which the equipment will be temporarily operated shall be notified at least 1 day prior to such operation. If the decision to continue operation for more than 1 day is not made until the operation has begun, notice shall be given to the Commission and the relevant Engineers in charge within 1 day after such decision. In all instances, the Commission and the relevant Engineers in charge shall be notified when the transmitting equipment has been returned to its licensed area.

(f) A cable network-entity may use CARS stations to transmit their own television program materials to cable systems, other cable network-entities, broadcast stations and broadcast network-entities: *Provided, however*, that the bands 1990-2110 MHz, 6425-6525 MHz and 6875-7125 MHz may be used by cable network-entities only for CARS pick-up stations.

(g) The provisions of paragraph (d) of this section and § 78.13 shall not apply to a licensee who has been licensed in the CARS service pursuant to § 21.709 of this chapter, except that paragraph (d) of this section shall apply with respect to facilities added or cable television systems first served after February 1, 1966.

[37 FR 3292, Feb. 12, 1972, as amended at 37 FR 15926, Aug. 8, 1972; 43 FR 1953, Jan. 13, 1978; 43 FR 25127, June 9, 1978; 44 FR 32382, June 6, 1979; 47 FR 21503, May 18, 1982; 50 FR 23421, June 4, 1985; 52 FR 7144, Mar. 9, 1987]

§ 78.13 Eligibility for license.

A license for CARS station will be issued only:

(a) To the owner or one who is responsible for the management and operation of a cable television system,

(b) To a cooperative enterprise wholly owned by cable television owners or operators, or

(c) A cable network-entity upon showing that the applicant is qualified under the Communications Act of 1934, that frequencies are available for the proposed operation, and that the public interest, convenience, and necessity will be served by a grant thereof.

[52 FR 7144, Mar. 9, 1987]

§ 78.15 Contents of applications.

(a) Applications for authorization in the Cable Television Relay Service shall be submitted on FCC Form 327, and shall contain the information requested therein. Applications requiring fees as set forth at part 1, subpart G of this chapter must be filed in accordance with § 0.401(b) of the rules.

(b) An application for a CARS studio to headend link or LDS station license shall contain a statement that the applicant has investigated the possibility of using cable rather than microwave and the reasons why it was decided to use microwave rather than cable.

NOTE: Each applicant filing pursuant to § 78.15 is responsible for the continuing accuracy and completeness of all information in such applications. The provisions of § 1.65 are wholly applicable to applications pursuant to § 78.15, as well as to amendments filed pursuant to § 78.17, and objections filed pursuant to § 78.22, except that where the specific provisins of §§ 78.15, 78.17, 78.22 conflict with the provisions of § 1.65, the specific provisions are controlling, e.g., where requirements for service on specified parties of certain information may vary.

(c) CARS applicants must follow the procedures prescribed in subpart 1 of part 1 of this chapter (§§ 1.1301 through 1.1319) regarding the filing of environmental assessments unless Commission action authorizing construction of a CARS station would be categorically excluded from the environmental processing requirements under § 1.1306 of this chapter.

[41 FR 3719, Jan. 23, 1976, as amended at 41 FR 32429, Aug. 3, 1976; 42 FR 61864, Dec. 7, 1977; 50 FR 23421, June 4, 1985; 52 FR 10231, Mar. 31, 1987; 55 FR 20398, May 16, 1990]

§ 78.16 Who may sign applications.

(a) Applications, amendments thereto, and related statements of fact required by the Commission shall be personally signed by the applicant, if the applicant is an individual; by one of the partners, if the applicant is a partnership; by an officer, if the applicant is a corporation; or by a member who is an officer, if the applicant is an unincorporated association. Applications, amendments, and related statements of fact filed on behalf of government entities shall be signed by such duly elected or appointed officials as may be competent to do so under the laws of the applicable jurisdiction.

(b) Applications, amendments thereto, and related statements of fact required by the Commission may be signed by the applicant's attorney in case of the applicant's physical disability or of his absence from the United States. The attorney shall in that event separately set forth the reasons why the application is not signed by the applicant. In addition, if any matter is stated on the basis of the attorney's belief only (rather than his knowledge), he shall separately set forth his reasons for believing that such statements are true.

(c) Only the original of applications, amendments, or related statements of fact need be signed; copies may be conformed.

(d) Applications, amendments, and related statements of fact need not be submitted under oath. Willful false statements made therein, however, are punishable by fine and imprisonment, United States Code, title 18, section 1001, and by appropriate administrative sanctions, including revocation of station license pursuant to section 312(a)(1) of the Communications Act of 1934, as amended.

[37 FR 15926, Aug. 8, 1972]

§ 78.17 Amendment of applications.

Any application may be amended as a matter of right prior to the adoption date of any final action taken by the Commission with respect to the application, merely by filing the appropriate number of copies of the amendment in question duly executed in accordance with § 78.16. If a petition to deny has been filed, the amendment shall be served on the petitioner.

[37 FR 15926, Aug. 8, 1972]

§ 78.18 Frequency assignments.

(a) The Cable Television Relay Service is assigned the band of frequencies from 12.70 to 13.20 GHz. This band is shared with the Fixed-Satellite Service (earth-to-space) from 12.70 to 12.75 GHz and Television Auxiliary Broad-ast Stations from 12.70 to 13.20 GHz. The following channels may be assigned to CARS stations for the propagation of radio waves with the indicated polarization:

(1) For CARS stations using FM transmission:

GROUP A CHANNELS

Designation	Channel boundaries (GHz)
A01 [1]	12.700-12.725
A02 [1]	12.725-12.750
A03 [1]	12.750-12.775
A04 [1]	12.775-12.800
A05 [1]	12.800-12.825
A06 [1]	12.825-12.850
A07 [1]	12.850-12.875
A08 [1]	12.875-12.900
A09 [1]	12.900-12.925
A10 [1]	12.925-12.950
A11 [1]	12.950-12.975
A12 [1]	12.975-13.000
A13 [1]	13.000-13.025
A14 [1]	13.025-13.050
A15 [1]	13.050-13.075
A16 [1]	13.075-13.100
A17 [1]	13.100-13.125
A18 [1]	13.125-13.150
A19 [1]	[2] 13.150-13.175
A20 [1]	[2] 13.170-13.200

[1] Appropriate polarization designation:

H=Horizontally polarized propagated radio wave.
V=Vertically polarized propagated radio wave.
R=Right-handed (clockwise) elliptically polarized propagated radio wave.
L=Left-handed (counter-clockwise) elliptically polarized propagated radio wave.

[2] See paragraph (l) of this section.

NOTE: Polarization designations shall be in accordance with IEEE standard 100-1972 as amended.

GROUP B CHANNELS

Designation	Channel boundaries (GHz)
B01 [1]	12.7125-12.7375
B02 [1]	12.7375-12.7625
B03 [1]	12.7625-12.7875
B04 [1]	12.7875-12.8125
B05 [1]	12.8125-12.8375
B06 [1]	12.8375-12.8625
B07 [1]	12.8625-12.8875
B08 [1]	12.8875-12.9125
B09 [1]	12.9125-12.9375
B10 [1]	12.9375-12.9625
B11 [1]	12.9625-12.9875
B12 [1]	12.9875-13.0125
B13 [1]	13.0125-13.0375
B14 [1]	13.0375-13.0625
B15 [1]	13.0625-13.0875
B16 [1]	13.0875-13.1125
B17 [1]	13.1125-13.1375
B18 [1]	[2] 13.1375-13.1625
B19 [1]	[2] 13.1625-13.1875

[1] See footnote 1 following GROUP A CHANNELS.

[2] See paragraph (l) of this section.

NOTE: Polarization designations shall be in accordance with IEEE standard 100-1972 as amended.

(2) CARS stations using vestigal sideband AM transmission and FM transmission requiring a necessary bandwidth of no more than 6 MHz.

GROUP C CHANNELS

Designation	Channel boundaries (GHz)
C01 [1]	12.7005-12.7065
C02 [1]	12.7065-12.7125
C03 [1]	12.7125-12.7185
C04 [1]	[2] 12.7185-12.7225
C05 [1]	12.7225-12.7285
C06 [1]	12.7285-12.7345
C07 [1]	12.7345-12.7405
C08 [1]	12.7405-12.7465
C09 [1]	12.7465-12.7525
C10 [1]	[2] 12.7525-12.7545
C11 [1]	12.7545-12.7605
C12 [1]	12.7605-12.7665
C13 [1]	12.7665-12.7725
C14 [1]	12.7725-12.7785
C15 [1]	12.7785-12.7845
C16 [1]	12.7845-12.7905
C17 [1]	12.7905-12.7965
C18 [1]	12.7965-12.8025
C19 [1]	12.8025-12.8085
C20 [1]	12.8085-12.8145
C21 [1]	12.8145-12.8205
C22 [1]	12.8205-12.8265
C23 [1]	12.8265-12.8325
C24 [1]	12.8325-12.8385
C25 [1]	12.8385-12.8445
C26 [1]	12.8445-12.8505
C27 [1]	12.8505-12.8565
C28 [1]	12.8565-12.8625
C29 [1]	12.8625-12.8685
C30 [1]	12.8685-12.8745
C31 [1]	12.8745-12.8805
C32 [1]	12.8805-12.8865
C33 [1]	12.8865-12.8925
C34 [1]	12.8925-12.8985
C35 [1]	12.8985-12.9045
C36 [1]	12.9045-12.9105
C37 [1]	12.9105-12.9165
C38 [1]	12.9165-12.9225
C39 [1]	12.9225-12.9285
C40 [1]	12.9285-12.9345
C41 [1]	12.9345-12.9405
C42 [1]	12.9405-12.9465

[1] See footnote 1 following GROUP A CHANNELS.

[2] For transmission of pilot subcarriers or other authorized narrow band signals.

GROUP D CHANNELS

Designation	Channel boundaries (GHz)
D01[1]	12.7597-12.7657
D02[1]	12.7657-12.7717
D03[1]	12.7717-12.7777
D04[1]	[2] 12.7777-12.7817
D05[1]	12.7817-12.7877
D06[1]	12.7877-12.7937
D07[1]	12.7937-12.7997
D08[1]	12.7997-12.8057
D09[1]	12.8057-12.8117
D10[1]	[2] 12.8117-12.8137
D11[1]	12.8137-12.8197
D12[1]	12.8197-12.8257
D13[1]	12.8257-12.8317
D14[1]	12.8317-12.8377
D15[1]	12.8377-12.8437
D16[1]	12.8437-12.8497
D17[1]	12.8497-12.8557
D18[1]	12.8557-12.8617
D19[1]	12.8617-12.8677
D20[1]	12.8677-12.8737
D21[1]	12.8737-12.8797
D22[1]	12.9797-12.8857
D23[1]	12.8857-12.8917
D24[1]	12.8917-12.8977
D25[1]	12.8977-12.9037
D26[1]	12.9037-12.9097
D27[1]	12.9097-12.9157
D28[1]	12.9157-12.9217
D29[1]	12.9217-12.9277
D30[1]	12.9277-12.9337
D31[1]	12.9337-12.9397
D32[1]	12.9397-12.9457
D33[1]	12.9457-12.9517
D34[1]	12.9517-12.9577
D35[1]	12.9577-12.9637
D36[1]	12.9637-12.9697
D37[1]	12.9697-12.9757
D38[1]	12.9757-12.9817
D39[1]	12.9817-12.9877
D40[1]	12.9877-12.9937
D41[1]	12.9937-12.9997
D42[1]	12.9997-13.0057

[1] See footnote 1 following GROUP A CHANNELS.
[2] See footnote 2 following GROUP C CHANNELS.

GROUP E CHANNELS

Designation	Channel boundaries (GHz)
E01[1]	12.9525-12.9585
E02[1]	12.9585-12.9645
E03[1]	12.9645-12.9705
E04[1]	[2] 12.9705-12.9745
E05[1]	12.9745-12.9805
E06[1]	12.9805-12.9865
E07[1]	12.9865-12.9925
E08[1]	12.9925-12.9985
E09[1]	12.9985-13.0045
E10[1]	[2] 13.0045-13.0065
E11[1]	13.0065-13.0125
E12[1]	13.0125-13.0185

GROUP E CHANNELS—Continued

Designation	Channel boundaries (GHz)
E13[1]	13.0165-13.024
E14[1]	13.0245-13.030
E15[1]	13.0305-13.036
E16[1]	13.0365-13.042
E17[1]	13.0425-13.048
E18[1]	13.0485-13.054
E19[1]	13.0545-13.060
E20[1]	13.0605-13.066
E21[1]	13.0665-13.072
E22[1]	13.0725-13.078
E23[1]	13.0785-13.084
E24[1]	13.0845-13.090
E25[1]	13.0905-13.096
E26[1]	13.0965-13.102
E27[1]	13.1025-13.108
E28[1]	13.1085-13.114
E29[1]	13.1145-13.120
E30[1]	13.1205-13.126
E31[1]	13.1265-13.132
E32[1]	13.1325-13.138
E33[1]	13.1385-13.144
E34[1]	[3] 13.1445 13.150
E35[1]	[3] 13.1505 13.156
E36[1]	[3] 13.1565 13.162
E37[1]	[3] 13.1625 13.168
E38[1]	[3] 13.1685 13.174
E39[1]	[3] 13.1745 13.180
E40[1]	[3] 13.1805 13.186
E41[1]	[3] 13.1865 13.192
E42[1]	[3] 13.1925 13.198

[1] See footnote 1 following GROUP A CHANNELS.
[2] See footnote 2 following GROUP C CHANNELS.
[3] See paragraph (l) of this section.

GROUP F CHANNELS

Designation	Channel boundaries (GHz)
F01[1]	13.0125-13.018
F02[1]	13.0185-13.024
F03[1]	13.0245-13.030
F04[1]	[2] 13.030 13.034
F05[1]	13.0345-13.040
F06[1]	13.0405-13.046
F07[1]	13.0465-13.052
F08[1]	13.0525-13.058
F09[1]	13.0585-13.064
F10[1]	[2] 13.064 13.06
F11[1]	[2] 13.066 13.072
F12[1]	13.0725-13.078
F13[1]	13.0785-13.084
F14[1]	13.0845-13.090
F15[1]	13.0905-13.096

GROUP F CHANNELS—Continued

Designation	Channel boundaries (GHz)
F16[1]	13.0965-13.1025
F17[1]	13.1025-13.1085
F18[1]	13.1085-13.1145
F19[1]	13.1145-13.1205
F20[1]	13.1205-13.1265
F21[1]	13.1265-13.1325
F22[1]	13.1325-13.1385
F23[1]	13.1385-13.1445
F24[1]	[3] 13.1445-13.1505
F25[1]	[3] 13.1505-13.1565
F26[1]	[3] 13.1565-13.1625
F27[1]	[3] 13.1625-13.1685
F28[1]	[3] 13.1685-13.1745
F29[1]	[3] 13.1745-13.1805
F30[1]	[3] 13.1805-13.1865
F31[1]	[3] 13.1865-13.1925
F32[1]	[3] 13.1925-13.1985

[1] See footnote 1 following GROUP A CHANNELS.

[2] See footnote 2 following GROUP C CHANNELS.

[3] See paragraph (l) of this section.

(3) For CARS stations using AM and FM transmission requiring a necessary bandwidth of no more than 12.5 MHz.

GROUP K CHANNEL

Designation	Channel boundaries (GHz)
K01[1]	12.7000-12.7125
K02[1]	12.7125-12.7250
K03[1]	12.7250-12.7375
K04[1]	12.7375-12.7500
K05[1]	12.7500-12.7625
K06[1]	12.7625-12.7750
K07[1]	12.7750-12.7875
K08[1]	12.7875-12.8000
K09[1]	12.8000-12.8125
K10[1]	12.8125-12.8250
K11[1]	12.8250-12.8375
K12[1]	12.8375-12.8500
K13[1]	12.8500-12.8625
K14[1]	12.8625-12.6750
K15[1]	12.8750-12.8875
K16[1]	12.8875-12.9000
K17[1]	12.9000-12.9125
K18[1]	12.9125-12.9250
K19[1]	12.9250-12.9375
K20[1]	12.9375-12.9500
K21[1]	12.9500-12.9625
K22[1]	12.9625-12.9750
K23[1]	12.9750-12.9875
K24[1]	12.9875-13.0000
K25[1]	13.0000-13.0125
K26[1]	13.0125-13.0250
K27[1]	13.0250-13.0375
K28[1]	13.0375-13.0500
K29[1]	13.0500-13.0625
K30[1]	13.0625-13.0750
K31[1]	13.0750-13.0875
K32[1]	13.0875-13.1000
K33[1]	13.1000-13.1125
K34[1]	13.1125-13.1250
K35[1]	13.1250-13.1375
K36[1]	13.1375-13.1500
K37[1] [2]	13.1500-13.1625
K38[1] [2]	13.1625-13.1750
K39[1] [2]	13.1750-13.1875
K40[1] [2]	13.1875-13.2000

[1] See footnote 1 following GROUP A CHANNELS.

[2] See paragraph (l) of this section.

(4) The Cable Television Relay Service is also assigned the following frequencies in the 17,700 to 19,700 MHz band. These frequencies are co-equally shared with stations in fixed service under Parts 21, 74 and 94 of the Commission's Rules. Applicants may use either a two-way link or one or both frequencies of a frequency pair for a one-way link and shall coordinate proposed operations pursuant to procedures required in § 21.100(d). These bands may be used for analog or digital modulation.

(i) 2 MHz maximum authorized bandwidth channel:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
18141.0	n/a

(ii) 6 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
216 MHz Separation	
18145.0	n/a
18151.0	18367.0
18157.0	18373.0
18163.0	18379.0
18169.0	18385.0
18175.0	18391.0
18181.0	18397.0
18187.0	18403.0
18193.0	18409.0
18199.0	18415.0
18205.0	18421.0

Transmit (receive) (MHz)	Receive (transmit) (MHz)
18211.0	18427.0
18217.0	18433.0
18223.0	18439.0
18229.0	18445.0
18235.0	18451.0
18241.0	18457.0
18247.0	18463.0
18253.0	18469.0
18259.0	18475.0
18265.0	18481.0
18271.0	18487.0
18277.0	18493.0
18283.0	18499.0
18289.0	18505.0
18295.0	18511.0
18301.0	18517.0
18307.0	18523.0
18313.0	18529.0
18319.0	18535.0
18325.0	18541.0
18331.0	18547.0
18337.0	18553.0
18343.0	18559.0
18349.0	18565.0
18355.0	18571.0
18361.0	18577.0

(iii) 10 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1560 MHz Separation	
17705.0	19265.0
17715.0	19275.0
17725.0	19285.0
17735.0	19295.0
17745.0	19305.0
17755.0	19315.0
17765.0	19325.0
17775.0	19335.0
17785.0	19345.0
17795.0	19355.0
17805.0	19365.0
17815.0	19375.0
17825.0	19385.0
17835.0	19395.0
17845.0	19405.0
17855.0	19415.0
17865.0	19425.0
17875.0	19435.0
17885.0	19445.0
17895.0	19455.0
17905.0	19465.0
17915.0	19475.0
17925.0	19485.0
17935.0	19495.0
17945.0	19505.0
17955.0	19515.0
17965.0	19525.0
17975.0	19535.0
17985.0	19545.0
17995.0	19555.0
18005.0	19565.0
18015.0	19575.0
18025.0	19585.0
18035.0	19595.0
18045.0	19605.0
18055.0	19615.0
18065.0	19625.0
18075.0	19635.0
18085.0	19645.0
18095.0	19655.0
18105.0	19665.0
18115.0	19675.0
18125.0	19685.0
18135.0	19695.0

(iv) 20 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1560 MHz Separation	
17710.0	19270.0
17730.0	19290.0
17750.0	19310.0
17770.0	19330.0
17790.0	19350.0
17810.0	19370.0
17830.0	19390.0
17850.0	19410.0
17870.0	19430.0
17890.0	19450.0
17910.0	19470.0
17930.0	19490.0
17950.0	19510.0
17970.0	19530.0
17990.0	19550.0
18010.0	19570.0
18030.0	19590.0
18050.0	19610.0
18070.0	19630.0
18090.0	19650.0
18110.0	19670.0
18130.0	19690.0

(v) 40 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1560 MHz Separation	
17720.0	19280.0
17760.0	19320.0
17800.0	19360.0
17840.0	19400.0
17880.0	19440.0
17920.0	19480.0
17960.0	19520.0
18000.0	19560.0
18040.0	19600.0
18080.0	19640.0
18120.0	19680.0

(vi) 80 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1560 MHz Separation	
17740.0	19300.0
17820.0	19380.0
17900.0	19460.0
17980.0	19540.0
18060.0	19620.0

(5) *31.0 to 31.3 GHz.* These frequencies are shared on a co-equal basis with other stations in the fixed and mobile services (see parts 21, 74, 94 and 95). No interference protection is afforded to fixed or mobile stations operating in this band.

(i) 25 MHz authorized bandwidth channels, 150 MHz separation.

Transmit (receive) (MHz)	Receive (transmit) (MHz)
31,012.5	31,162.5
31,037.5	31,187.5
31,062.5	31,212.5
31,087.5	31,237.5
31,112.5	31,262.5
31,137.5	31,287.5

(ii) 50 MHz authorized bandwidth channels, 150 MHz separation.

Transmit (receive) (MHz)	Receive (transmit) (MHz)
31,025.0	31,175.0
31,075.0	31,225.0
31,125.0	31,275.0

(6) *6425 to 6525 MHz-Mobile Only.* Paired and unpaired operations permitted. Use of this spectrum for direct delivery of video programs to the general public or multi-channel cable distribution is not permitted. This band is co-equally shared with mobile stations licensed pursuant to parts 21, 74 and 94 of the Commission's Rules. The following channels plans apply.

(i) 1 MHz maximum authorized bandwidth channels.

Transmit (or receive) (MHz)	Receive (or transmit) (MHz)
6425.5	6475.5
6450.5	6500.5

(ii) 8 MHz maximum authorized bandwidth channels.

Transmit (or receive) (MHz)	Receive (or transmit) (MHz)
6430.0	6480.0
6438.0	6488.0
6446.0	6596.0
6455.0	6505.0
6463.0	6513.0
6471.0	6521.0

(iii) 25 MHz maximum authorized bandwidth channels.

Transmit (or receive) (MHz)	Receive (or transmit) (MHz)
6437.5	6487.5
6462.5	6512.5

(7) *1990-2110 MHz—Mobile only.* Use of this spectrum for direct delivery of video programs to the general public or multi-channel cable distribution is not permitted. This band is co-equally shared with stations licensed pursuant to parts 21 and 74 of the Commission's Rules. (Common carriers may use this band pursuant to provisions of § 21.801(b).) The following channeling plan applies subject to the provisions of § 74.604.

Frequency Band (MHz)
1990-2008
2008-2025
2025-2042
2042-2059
2059-2076
2076-2093
2093-2110

(8) *6875-7125 MHz—Mobile only.* Use of this spectrum for direct delivery of video programs to the general public or multi-channel cable distribution is not permitted. This band is co-equally shared with stations licensed pursuant to parts 21 and 74 of the Commission's Rules. (Common carriers may use this band pursuant to provisions of § 21.801(b).) The following channeling plan applies subject to the provisions of § 74.604.

Frequency Band (MHz)
6875–6900
6900–6925
6925–6950
6950–6975
6975–7000
7000–7025
7025–7050
7050–7075
7075–7100
7100–7125

(b) Television Auxiliary Broadcast Service stations may be assigned channels in the band 12.70-13.20 GHz subject to the condition that no harmful interference is caused to fixed CARS stations authorized at the time of such grants. Translator Relay stations are assigned on a secondary basis. New CARS stations shall not cause harmful interference to television STL and intercity relay stations authorized at the time of such grants. Television pickup stations and CARS pickup stations will be assigned channels in the band on a co-equal basis subject to the conditions that they accept interference from and cause no interference to existing or subsequently authorized television STL, television intercity relay, or fixed CARS stations. Channels in the 13.150-13.200 GHz band will be assigned exclusively to television pickup and CARS pickup stations on a co-equal basis. A cable television system operator will normally be limited in any one area to the assignment of not more than three channels for CARS pickup use: *Provided, however,* That additional channels may be assigned upon a satisfactory showing that additional channels are necessary and are available.

(c) An application for a CARS station shall be specific with regard to the channel or channels requested. Channels shall be identified by the appropriate designations set forth in paragraph (a) of this section.

(d) For CARS Fixed stations using FM transmission with an authorized bandwidth per channel of 25 MHz, to conserve spectrum applicants are encouraged to use alternate A and B channels such that adjacent R.F. carriers are spaced 12.5 MHz. As example, a fixed station in the CARS, relaying several channels, would use A01, B01, A02, B02, A03, etc.

(e) For CARS stations using vestigial sideband AM transmissions, channels from only the Groups C, D, E or F and those frequencies listed in paragraph (a)(4)(ii) of this section normally will be assigned a station, although upon adequate showing variations in the use of channels in Groups C, D, E or F and those frequencies listed in paragraph (a)(4)(ii) of this section may be authorized on a case-by-case basis in order to avoid potential interference or to permit a more efficient use. In situations where the number or the arrangement of channels available in these groups is not adequate, or in order to avoid potential interference, or in order to achieve the required VHF channelization arrangement on the cable television system or for repeated operations, or for two way transmission, or upon the showing of other good cause, the use of channels in the Groups C, D, E or F and those frequencies listed in paragraph (a)(4)(ii) of this section may be authorized. Applicants are encouraged to apply for adjacent channels within each group of channels, except that different channel arrangements may be authorized when required to conform to the required channelization arrangement at VHF on the cable television system, when it is necessary to transmit non-adjacent off-the-air channels or signals intended to fill non-adjacent slots in the spectrum, or to avoid potential interference, or upon other showing of good cause.

(f) For vestigial sideband AM transmission, the assigned visual carrier frequency for each channel listed in Groups C, D, E or F and those frequencies listed in paragraph (a)(4)(ii) of this section shall be 1.25 MHz above the lower channel-edge frequency. The center frequency for the accompanying FM aural carrier in each channel shall be 4.5 MHz above the corresponding visual carrier frequency.

(g) For CARS stations using double sideband AM transmission or FM transmission with authorized bandwidth of no more than 12.5 MHz, Group K channels normally will be assigned to a station, although upon adequate showing variations in the use of channels in Group K may be authorized on a case-by-case basis in order to avoid potential interference or to permit a more efficient use.

(h) For double sideband AM transmission, the assigned carrier frequency for each channel listed in Group K shall be 6.25 MHz above the lower boundary frequency for each channel, and the sideband frequencies corresponding to the carrier frequency of the accompanying FM aural signal shall be 4.5 MHz above and below the visual carrier frequency.

(i) All stations shall employ no more than a 12.5 MHz authorized bandwidth per channel except in any one or more of the following circumstances:

(1) The station is a CARS pickup station;

(2) The transmission path is more than 10 miles in length;

(3) The station was authorized or an application was on file therefor prior to July 26, 1973.

(4) Other good cause has been shown that use of a bandwidth of 12.5 MHz or less per channel would be inefficient, impractical, or otherwise contrary to the public interest.

(j) Should any conflict arise among applications for stations in this band, priority will be based on the filing date of an application completed in accordance with the instructions thereon.

(k) Applicants for Group K channels shall apply for adjacent channels and the requested channels shall overlap the least possible number of Group A channels, except that different channel arrangements may be authorized upon an adequate showing that the foregoing arrangement cannot be used or would be contrary to the public interest, or in order to avoid potential interference or to permit a more efficient use.

(l) The band 13.15-13.20 GHz is reserved exclusively for the assignment of CARS Pickup and Television Pickup stations on a co-equal basis within a 50 km radius of each of the 100 television markets delineated in § 76.51. Fixed Television Auxiliary stations licensed pursuant to applications accepted for filing before September 1, 1979, may continue operation on channels in the 13.15-13.20 GHz band, subject to periodic license renewals.

[37 FR 3292, Feb. 12, 1972. Redesignated at 37 FR 15926, Aug. 8, 1972]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 78.18, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 78.19 Interference.

(a) Applications for CARS stations shall endeavor to select an assignable frequency or frequencies which will be least likely to result in interference to other licensees in the same area since the FCC itself does not undertake frequency coordination.

(b) Applicants for CARS stations shall take full advantage of all known techniques, such as the geometric arrangement of transmitters and receivers, the use of minimum power required to provide the needed service, and the use of highly directive transmitting and receiving antenna systems, to prevent interference to the reception of television STL, television intercity relay, and other CARS stations.

(c) *Radio Astronomy and Radio Research Installations.* In order to minimize harmful interference at the National Radio Astronomy Observatory site located at Green Bank, Pocahontas County, W. Va., and at the Naval Radio Research Observatory at Sugar Grove, Pendleton County, W.Va., an applicant for authority to construct a CARS station, except a CARS pickup station, or for authority to make changes in the frequency, power, antenna height, or antenna directivity of an existing station within the area bounded by 39°15′ N. on the north, 78°30′ W. on the east, 37°30′ N. on the south and 80°30′ W. on the west shall, at the time of filing such application with the Commission, simultaneously notify the Director, National Radio Astronomy Observatory, Post Office Box No. 2, Green Bank, WV 24944, in writing, of the technical particulars of the proposed station. Such notification shall include the geographical coordinates of the antenna, antenna height, antenna directivity if any, proposed frequency, type of emission, and power. In addition, the applicant shall indicate in his application to the Commission the date notification was made to the Observatory. After receipt of such application, the Commission will allow a period of 20 days for comments or objections in response to the notifications indicated. If an objection to the proposed operation is received during the 20-day period from the National Radio Astronomy Observatory for itself or on behalf of the Naval Radio Research Observatory, the Commission will consider all aspects of the problem and take whatever action is deemed appropriate.

(d) Protection for Table Mountain Radio Receiving Zone, Boulder County, Colorado: Applicants for a station authorization to operate in the vicinity of Boulder County, Colorado under this part are advised to give due consideration, prior to filing applications, to the need to protect the Table Mountain Radio Receiving Zone from harmful interference. These are the research laboratories of the Department of Commerce, Boulder County, Colorado. To prevent degradation of the present ambient radio signal level at the site, the Department of Commerce seeks to ensure that the field strengths of any radiated signals (excluding reflected signals) received on this 1800 acre site (in the vicinity of coordinates 40°07′50″N Latitude, 105°14′40″W Longitude) resulting from new assignments (other than mobile stations) or from the modification or relocation of existing facilities do not exceed the following values:

Frequency range	In authorized bandwidth of service	
	Field strength (mV/m)	Power flux density [1] (dBW/m²)
Below 540 kHz	10	−65.8
540 to 1600 kHz	20	−59.8
1.6 to 470 MHz	10	[2] −65.8
470 to 890 MHz	30	[2] −56.2
Above 890 MHz	1	[2] −85.8

[1] Equivalent values of power flux density are caculated assuming free space characteristic impedance of 376.7 = 120π ohms.

[2] Space stations shall conform to the power flux density limits at the earth's surface specified in appropriate parts of the FCC rules, but in no case should exceed the above levels in any 4 kHz band for all angles of arrival.

(1) Advance consultation is recomended particularly for those applicants who have no reliable data which indicates whether the field strength or power flux density figures in the above table would be exceeded by their proposed radio facilities (except mobile stations). In such instances, the following is a suggested guide for determining whether coordination is recommended:

(i) All stations within 1.5 statute miles;

(ii) Stations within 3 statute miles with 50 watts or more effective radiated power (ERP) in the primary plane of polarization in the azimuthal direction of the Table Mountain Radio Receiving Zone;

(iii) Stations within 10 statute miles with 1 kW or more ERP in the primary plane or polarization in the azimuthal direction of Table Mountain Radio Receiving Zone;

(iv) Stations within 50 statute miles with 25 kW or more ERP in the primary plane of polarization in the azimuthal direction of Table Mountain Receiving Zone.

(2) Applicants concerned are urged to communicate with the Radio Frequency Management Coordinator, Department of Commerce, Research Support Services, NOAA R/E5X2, Boulder Laboratories, Boulder, CO 80303; telephone (303) 497-6548, in advance of filing their applications with the Commission.

(3) The Commission will not screen applications to determine whether advance consultation has taken place. However, applicants are advised that such consultation can avoid objections from the Department of Commerce or proceedings to modify any authorization which may be granted which, in fact, delivers a signal at the site in excess of the field strength specified herein.

(e) Protection for Federal Communications Commission monitoring stations:

(1) Applicants in the vicinity of an FCC monitoring station for a radio station authorization to operate new transmitting facilities or changed transmitting facilities which would increase the field strength produced over the monitoring station over that previously authorized are advised to give consideration, prior to filing applications, to the possible need to pro-

tect the FCC stations from harmful interference. Geographical coordinates of the facilities which require protection are listed in § 0.121(c) of the Commission's Rules. Applications for stations (except mobile stations) which will produce on any frequency a direct wave fundamental field strength of *greater than 10 mV/m* in the authorized bandwidth of service (−65.8 dBW/m² power flux density assuming a free space characteristic impedance of 120 ohms) at the referenced coordinates, may be examined to determine extent of possible interference. Depending on the theoretical field strength value and existing root-sum-square or other ambient radio field signal levels at the indicated coordinates, a clause protecting the monitoring station may be added to the station authorization.

(2) In the event that calculated value of expected field exceeds 10 mV/m (−65.8 dBW/m²) at the reference coordinates, or if there is any question whether field strength levels might exceed the threshold value, advance consultation with the FCC to discuss any protection necessary should be considered. Prospective applicants may communicate with: Chief, Field Operations Bureau, Federal Communications Commission, Washington, D.C. 20554, Telephone (202) 632-6980.

(3) Advance consultation is suggested particularly for those applicants who have no reliable data which indicates whether the field strength or power flux density figure indicated would be exceeded by their proposed radio facilities (except mobile stations). In such instances, the following is a suggested guide for determining whether an applicant should coordinate:

(i) All stations within 2.4 kilometers (1.5 statute miles);

(ii) Stations within 4.8 kilometers (3 statute miles) with 50 watts or more average effective radiated power (ERP) in the primary plane of polarization in the azimuthal direction of the Monitoring Stations.

(iii) Stations within 16 kilometers (10 statute miles) with 1 kW or more average ERP in the primary plane of polarization in the azimuthal direction of the Monitoring Station;

(iv) Stations within 80 kilometers (50 statute miles) with 25 kW or more average ERP in the primary plane of polarization in the azimuthal direction of the Monitoring Station;

(4) Advance coordination for stations operating above 1000 MHz is recommended only where the proposed station is in the vicinity of a monitoring station designated as a satellite monitoring facility in section 0.121(c) of the Commission's Rules and also meets the criteria outlined in paragraphs (f)(2) and (3) of this section.

(5) The Commission will not screen applications to determine whether advance consultation has taken place. However, applicants are advised that such consultation can avoid objections from the Federal Communications Commission or modification of any authorization which will cause harmful interference.

[37 FR 3292, Feb. 12, 1972, as amended at 37 FR 15926, Aug. 8, 1972; 37 FR 26733, Dec. 15, 1972; 38 FR 1920, Jan. 19, 1973; 42 FR 33037, June 29, 1977; 44 FR 77167, Dec. 31, 1979; 45 FR 78694, Nov. 26, 1980; 50 FR 32418, Aug. 12, 1985; 50 FR 40863, Oct. 7, 1985; 50 FR 45406, Oct. 31, 1985]

§ 78.20 Acceptance of applications; public notice.

(a) Applications which are tendered for filing in Washington, DC, are dated upon receipt and then forwarded to the Mass Media Bureau where an administrative examination is made to ascertain whether the applications are complete. Applications found to be complete or substantially complete, are accepted for filing and are given a file number. In case of minor defects as to completeness, the applicant will be required to supply the missing information. Applications which are not substantially complete will be returned to the applicant. Applications requiring fees as set forth at Part 1, Subpart G of this chapter must be filed in accordance with § 0.401(b) of the rules.

(b) Acceptance of an application for filing means only that it has been the subject of a preliminary review by the Commission's administrative staff as to completeness. Applications which are determined to be clearly not in accordance with the Commission's rules or other requirements, unless accompanied by an appropriate request for waiver, will be considered defective and will not be accepted for filing, or if inadvertently accepted for filing, will be dismissed. Requests for waiver shall show the nature of the waiver or exception desired and shall set forth the reasons in support thereof.

(c) The Commission will give public notice of all applications and major amendments thereto which have been accepted for filing. No application shall be acted on less than thirty (30) days from the date of public notice.

[37 FR 15926, Aug. 8, 1972, as amended at 52 FR 10231, Mar. 31, 1987]

§ 78.21 Dismissal of applications.

(a) Any application may, on request of the applicant, be dismissed without prejudice as a matter of right prior to the adoption date of any final action taken by the Commission with respect to the application. An applicant's request for the return of an application will be regarded as a request for dismissal.

(b) Failure to prosecute an application, or failure to respond to official correspondence or request for additional information, will be cause for dismissal. Such dismissal will be without prejudice if it occurs prior to the adoption date of any final action taken by the Commission with respect to the application.

[37 FR 15927, Aug. 8, 1972]

§ 78.22 Objections to applications.

(a) Any party in interest may file a petition to deny any application (whether as originally filed or as amended) no later than thirty (30) days after issuance of a public notice of the acceptance for filing of any such application or amendment thereto. Petitions to deny shall contain specific allegations of fact sufficient to show that the petitioner is a party in interest and that a grant of the application would be prima facie inconsistent with the public interest, convenience, and necessity. Such allegations of fact shall, except for those of which official notice may be taken, be supported by affidavit of a person or persons with personal knowledge thereof.

(b) The applicant may file an opposition to any petition to deny, and the petitioner may file a reply to such opposition (see § 1.45 of this chapter), in which allegations of fact or denials thereof shall be supported by affidavit of a person or persons with personal knowledge thereof.

(c) Notwithstanding the provisions of paragraph (a) of this section, before Commission action on any application for an instrument of authorization, any person may file informal objections to the grant. Such objections may be submitted in letter form (without extra copies) and shall be signed by the objector. The limitation on pleadings and time for filing pleadings provided for in § 1.45 of this chapter shall not be applicable to any objections duly filed pursuant to this paragraph.

[37 FR 15927, Aug. 8, 1972, as amended at 50 FR 23421, June 4, 1985]

§ 78.23 Equipment tests.

(a) Following the grant of a CARS license, the licensee, during the process of construction of the station, may, without further authority from the Commission, conduct equipment tests for the purpose of such adjustments and measurements as may be necessary to assure compliance with the terms of the authorization, the technical provisions of the application therefore, the rules and regulations, and the applicable engineering standards.

(b) The Commission may notify the licensee to conduct no tests or may cancel, suspend, or change the date for the beginning of equipment tests as and when such action may appear to be in the public interest, convenience, and necessity.

(c) The test authorized in this section shall be conducted only as a necessary part of construction.

[50 FR 23421, June 4, 1985]

§ 78.27 License conditions.

(a) Authorizations (including initial grants, modifications, assignments or transfers of control, and renewals) in the Cable Television Relay Service to serve cable television systems, shall contain the condition that such cable television systems shall operate in compliance with the provisions of part 76 (Cable Television Service) of this chapter.

(b) CARS stations licensed under this subpart are required to commence operation within one year of the date of the license grant.

(1) The licensee of a CARS station shall notify the Commission in writing when the station commences operation. Such noitification shall be submitted on or before the last day of the authorized one year construction period; otherwise, the station license shall be automatically forfeited.

(2) CARS licensees needing additional time to complete construction of the station and commence operation shall request an extension of time 30 days before the expiration of the one year construction period. Exceptions to the 30-day advance filing requirement may be granted where unanticipated delays occur.

[50 FR 23421, June 4, 1985]

§ 78.29 License period.

Licenses for CARS stations will be issued for a period not to exceed five (5) years. On and after February 1, 1966, licenses for CARS stations ordinarily will be issued for a period expiring on February 1, 1971, and, when regularly renewed, at 5-year intervals thereafter. When a license is granted subsequent to the last renewal date for CARS stations, the license will be issued only for the unexpired period of the current license term of such stations. The license renewal date applicable to CARS stations may be varied as necessary to permit the orderly processing of renewal applications, and individual station licenses may be granted or renwed for a shorter period of time than that generally prescribed for CARS stations, if the Commission finds that the public interest, convenience, and necessity would be served by such action.

§ 78.31 Temporary extension of license.

Where there is pending before the Commission any application, investigation, or proceeding which, after hearing, might lead to or make necessary the modification of, revocation of or the refusal to renew an existing cable television relay station license, the Commission will grant a temporary extension of such license: *Provided, however,* That no such temporary extension shall be construed as a finding by the Commission that the operation of any CARS station thereunder will serve the public interest, convenience, and necessity beyond the express terms of such temporary extension of license: *And provided, further,* That such temporary extension of license will in nowise affect or limit the action of the Commission with respect to any pending application or proceeding.

§ 78.33 Special temporary authority.

(a) Notwithstanding the requirements of §§ 78.15 and 78.20, in circumstances requiring immediate or temporary use of facilities, a request may be made for special temporary authority to install and operate new equipment or to operate licensed equipment in a manner different from that authorized in a station license. Any such request may be in letter form, and shall be submitted in duplicate: *Provided, however,* That in cases of emergency involving danger to life or property or due to damage to equipment, such request may be made by telephone or telegraph with the understanding that a written request shall be submitted within ten (10) days thereafter.

(b) Special temporary authority may also be requested to conduct a filed survey to determine necessary data in connection with the preparation of a formal application for installation of a radio system under this part. Such authority may be granted to equipment suppliers and others who are not operators of cable television systems, as well as to cable operators, to conduct equipment, program, service, and path tests.

(c) Any request for special temporary authority shall be clear and complete within itself as to the authority requested. In addition, such requests shall contain the following information:

(1) Name, address, and citizenship of applicant;

(2) Grounds for special action, including a description of any emergency or damage to equipment;

(3) Type of operation to be conducted;

(4) Purpose of operation;

(5) Time and date of proposed operation;

(6) Class of station and nature of service;

(7) Location of station;

(8) Equipment to be used, specifying manufacturer, model number, and number of units;

(9) Frequency or frequencies desired, consistent with § 78.18: *Provided, however,* That in the case of events of widespread interest and importance that cannot be transmitted successfully on these frequencies, frequencies assigned to other services may be requested on a showing that operation thereon will not cause interference to established stations: *And provided, further,* That in no case will a cable television relay service operation be authorized on frequencies employed for the safety of life and property;

(10) Plate power input to final radio frequency stage;

(11) Type of emission;

(12) Description of antenna to be used, including height. In the event that the proposed antenna installations will increase the height of any natural formation, or existing manmade structure, by more than twenty (20) feet, a vertical plan sketch showing the height of the structures proposed to be erected, the height above ground of any existing structure, the elevation of the site above mean sea level, and the geographic coordinates of the proposed sites shall be submitted with the application.

(d) Except in emergencies involving safety of life or property or due to damage to equipment, a request for special temporary authority shall be filed at least ten (10) days prior to the date of proposed operation, or shall be accompanied by a statement of reasons for the delay in submitting such request.

(e) If the Commission finds that special temporary authority is in the public interest, it may grant such authority for a period not exceeding ninety (90) days, and, on a like finding, may extend such authority for one additional period not to exceed ninety (90) days.

[37 FR 15927, Aug. 8, 1972]

§ 78.35 Assignment or transfer of control.

(a) No assignment of the license of a cable television relay station or transfer of control of a CARS licensee shall occur without prior FCC authorization.

(b) If an assignment or transfer of control does not involve a substantial change of interests, the provisions of §§ 78.20(c) and 78.22, concerning public notice and objections, shall be waived.

(c) Licensees of CARS stations are not required to submit applications for assignment or transfer of control or otherwise notify the FCC in cases where the change in ownership does not affect the identity or controlling interest of the licensee.

[37 FR 15927, Aug. 8, 1972, as amended at 50 FR 23421, June 4, 1985]

§ 78.36 Frequency coordination.

(a) *12.7-13.25 GHz.* Coordination of fixed and mobile assignments will be in accordance with the procedures set forth below.

(1) Before filing an application for new or modified facilities under this part the applicant must perform a frequency engineering analysis to ensure that the proposed facilities will not cause interference to existing or previously applied for stations in this band of a magnitude greater than that specified below.

(2) The general criteria for determining allowable adjacent or co-channel interference protection to be afforded, regardless of system length or type of modulation, multiplexing or frequency band shall be such that the interfering signal shall not produce more than 1.0 dB degradation of the practical threshold of the protected receiver. The degradation is determined by calculating the ratio in dB between the desired carrier signal and undesired interfering signal (C/I ratio) appearing at the input to the receiver under investigation (the victim receiver). The development of the C/I ratios from the criteria for maximum allowable interference level per exposure and the methods used to perform path calculations shall follow generally ac-

eptable good engineering practices. Procedures as may be developed by the Electronics Industries Association (EIA), the Institute of Electrical and Electronics Engineers, Inc. (IEEE), the American National Standards Institute (ANSI) or any other recognized authority will be acceptable to the Commission.

(3) Where the development of the carrier to interference ratio (C/I) is not covered by generally acceptable procedures or where the applicant does not wish to develop the carrier to interference ratio, the applicant shall employ the following C/I protection ratios:

(i) Co-channel interference: For both sideband and carrier-beat, (applicable to all bands) the previously authorized system shall be afforded a carrier to interfering signal protection ratio of at least 90 dB.

(ii) Adjacent channel interference: The existing or previously authorized system shall be afforded a carrier to interfering signal protection ratio of at least 56 dB.

(b) *6425–6525 MHz and 17.7–19.7 GHz.* Coordination of fixed and mobile assignments will be in accordances with the procedure established in §21.100(d), *except* that the prior coordination process for mobile (temporary fixed) assignments may be completed orally and the period allowed for response to a coordination notification may be less than 30 days if the parties agree.

[48 FR 50736, Nov. 3, 1983, as amended at 52 FR 7144, Mar. 9, 1987]

Subpart C—General Operating Requirements

§78.51 Remote control operation.

(a) A CARS station may be operated by remote control: *Provided,* That such operation is conducted in accordance with the conditions listed below: *And provided further,* That the Commission, in Washington, DC, is notified at least 10 days prior to the beginning of such operation and that such notification is accompanied by a detailed description showing the manner of compliance with the following conditions:

(1) The transmitter and associated control system shall be installed and protected in a manner designed to prevent tampering or operation by unauthorized persons.

(2) An operator shall be on duty at the remote control position and in actual charge thereof at all times when the station is in operation.

(3) Facilities shall be provided at the control position which will permit the operator to turn the transmitter on and off at will. The control position shall also be equipped with suitable devices for observing the overall characteristics of the transmissions and a carrier operated device which will give a continuous visual indication whenever the transmitting antenna is radiating a signal. The transmitting apparatus shall be inspected as often as may be necessary to insure proper operation.

(4) The control circuits shall be so designed and installed that short circuits, open circuits, other line faults, or any other cause which would result in loss of control of the transmitter will automatically cause the transmitter to cease radiating.

(b) An application for authority to construct a new station or to make changes in the facilities of an existing station and which proposes operation by remote control shall include an adequate showing of the manner of compliance with the requirements of this section.

(c) The Commission may notify the licensee not to commence remote control operation, or to cancel, suspend, or change the date of the beginning of such operation as and when such action may appear to be in the public interest, convenience, or necessity.

[37 FR 3292, Feb. 12, 1972, as amended at 41 FR 29695, July 19, 1976; 49 FR 20671, May 16, 1984; 50 FR 23421, June 4, 1985]

§ 78.53 Unattended operation.

(a) A CARS station may be operated unattended: *Provided,* That such operation is conducted in accordance with the conditions listed below: *And provided further,* That the Commission, in Washington, D.C., is notified at least 10 days prior to the beginning of unattended operation if such operation is not indicated on the station authorization.

(1) The transmitter and associated control circuits shall be installed and protected in a manner designed to prevent tampering or operation by unauthorized persons.

(2) If the transmitting apparatus is located at a site which is not readily accessible at all hours and in all seasons, means shall be provided for turning the transmitter on and off at will from a location which can be reached promptly at all hours and in all seasons.

(3) Personnel responsible for the maintenance of the station shall be available on call at a location which will assure expeditious performance of such technical servicing and maintenance as may be necessary whenever the station is operating. In lieu thereof, arrangements may be made to have a person or persons available at all times when the transmitter is operating, to turn the transmitter off in the event that it is operating improperly. The transmitter may not be restored to operation until the malfunction has been corrected by a technically qualified person.

(4) The station licensee shall be responsible for the proper operation of the station at all times and is expected to provide for observations, servicing and maintenance as often as may be necessary to ensure proper operation. All adjustments or tests during or coincident with the installation, servicing, or maintenance of the station which may affect its operation shall be performed by or under the immediate supervision of a technically qualified person.

(b) The Commission may notify the licensee not to commence unattended operation, or to cancel, suspend, or change the date of the beginning of such operation as and when such action may appear to be in the public interest, convenience, or necessity.

(Secs. 1, 2, 301, 307, 48 Stat., as amended 1064, 1081, 1083; (47 U.S.C. 151, 152, 301, 307))

[37 FR 3292, Feb. 12, 1972, as amended at 41 FR 29695, July 19, 1976; 42 FR 61864, Dec. 7, 1977; 43 FR 4617, Feb. 3, 1978; 43 FR 25127, June 9, 1978; 49 FR 20671, May 16, 1984; 50 FR 23422, June 4, 1985; 50 FR 32418, Aug. 12, 1985]

§ 78.55 Time of operation.

A CARS station is not expected to adhere to any prescribed schedule of operation. Continous radiation of the carrier without modulation is permitted provided harmful interference is not caused to other authorized stations.

[43 FR 25127, June 9, 1978]

§ 78.57 Station inspection.

The station and all records required to be kept by the licensee shall be made available for inspection upon request by any authorized representative of the Commission.

§ 78.59 Posting of station and operator licenses.

(a) The station license and any other instrument of authorization or individual order concerning the construction or the equipment or manner of operation shall be posted at the place where the transmitter is located, so that all terms thereof are visible except as otherwise provided in paragraphs (b) and (c) of this section.

(b) In cases where the transmitter is operated by remote control, the documents referred to in paragraph (a) of this section shall be posted in the manner described at the control point of the transmitter.

(c) In cases where the transmitter is operated unattended, the name of the licensee and the call sign of the unattended station shall be displayed at the transmitter site on the structure supporting the transmitting antenna, so as to be visible to a person standing on the ground at the transmitter site. The display shall be prepared so as to withstand normal weathering for a reasonable period of time and shall be maintained in a legible condition at all times by the licensee. The station license and other documents referred to in paragraph (a) of this section shall be kept at the nearest attended station or, in cases where the licensee of the unattended station does not operate attended stations, at the point of destination of the signals relayed by the unattended station.

FR 3292, Feb. 12, 1972, as amended at 49 R 20671, May 16, 1984]

78.61 Operator requirements.

(a) Except in cases where a CARS tation is operated unattended in ac- ordance with § 78.53 or except as pro- ided in other paragraphs of this sec- ion, a person shall be on duty at the lace where the transmitting appara- us is located, in plain view and in ctual charge of its operation or at a emote control point established pur- uant to the provision of § 78.51, at all imes when the station is in operation. Control and monitoring equipment at remote control point shall be readily ccessible and clearly visible to the op- rator at that position.

(b) Any transmitter tests, adjust- nents, or repairs during or coincident with the installation, servicing, oper- ation or maintenance of a CARS sta- ion which may affect the proper operation of such station shall be made by r under the immediate supervision and responsibility of a person respon- ible for proper functioning of the sta- ion equipment.

(c) The operator on duty and in charge of a CARS station may, at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the rules governing such stations. However, such duties shall in no way impair or impede the required supervision of the CARS station.

(d) CARS stations operating with nominal transmitter power of 250 milliwatts or less may be operated by any person whom the licensee shall designate. Pursuant to this provision, the designated person shall perform as the licensee's agent and proper operation of the station shall remain the licensee's responsibility.

(e) Mobile CARS stations operating with nominal transmitter power in excess of 250 milliwatts may be operated by any person whom the licensee shall designate: Provided that a person is on duty at a receiving end of the circuit to supervise operation and to immediately institute measures sufficient to assure prompt correction of any condition of improper operation that may be observed.

(Secs. 1, 2, 301, 307, 48 Stat., as amended, 1064, 1081, 1083; (47 U.S.C. 151, 152, 301, 307))

[43 FR 4617, Feb. 3, 1978, as amended at 49 FR 20671, May 16, 1984; 50 FR 32418, Aug. 12, 1985]

§ 78.63 Inspection and maintenance of tower marking and associated control equipment.

The licensee of any CARS station which has an antenna structure required to be painted or illuminated pursuant to the provisions of section 303(q) of the Communications Act of 1934, as amended, and/or part 17 of this Chapter, shall operate and maintain the tower marking and associated control equipment in accordance with the following:

(a) The tower lights shall be observed at least once each 24 hours, either visually or by observing an automatic and properly maintained indicator designed to register any failure of such lights, to insure that all such lights are functioning properly as required; or, alternatively, there shall be provided and properly maintained an automatic alarm system designed to detect any failure of the tower lights and to provide indication of such failure to the licensee.

(b) Any observed or otherwise known failure of a code or rotating beacon light or top light not corrected within thirty minutes, regardless of the cause of such failure, shall be reported immediately by telephone or telegraph to the nearest Flight Service Station or office of the Federal Aviation Administration. Further notification by telephone or telegraph shall be given immediately upon resumption of the required illumination.

(c) All automatic or mechanical control devices, indicators, and alarm systems associated with the tower lights shall be inspected at intervals not to exceed three months, to insure that such apparatus is functioning properly.

(d) Red obstruction lighting shall be exhibited from sunset to sunrise unless otherwise specified in the instrument of station authorization.

(e) All towers shall be cleaned or repainted as often as is necessary to maintain good visibility.

[41 FR 29695, July 19, 1976, as amended at 50 FR 23422, June 4, 1985]

§ 78.65 Additional orders.

In case the rules of this part do not cover all phases of operation with respect to external effects, the Commission may make supplemental or additional orders in each case as may be deemed necessary.

§ 78.67 Copies of rules.

The licensee of a CARS station shall have a current copy of this part 78, and, in cases where aeronautical obstruction marking of antennas is required, part 17 of this chapter shall be available for use by the operator in charge. Both the licensee and the operator or operators responsible for the proper operation of the station are expected to be familiar with the rules governing CARS stations. Copies of the Commission's rules may be obtained from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at nominal cost.

§ 78.69 Station records.

Each licensee of a CARS station shall maintain records showing the following:

(a) For all attended or remotely controlled stations, the date and time of the beginning and end of each period of transmission of each channel;

(b) For all stations, the date and time of any unscheduled interruptions to the transmissions of the station, the duration of such interruptions, and the causes thereof;

(c) For all stations, the results and dates of the frequency measurements made pursuant to § 78.113 and the name of the person or persons making the measurements;

(d) For all stations, when service or maintenance duties are performed, which may affect a station's proper operation, the responsible operator shall sign and date an entry in the station's records, giving:

(1) Pertinent details of all transmitter adjustments performed by the operator or under the operator's supervision.

(e) When a station in this service has an antenna structure which is required to be illuminated, appropriate entries shall be made as follows:

(1) The time the tower lights are turned on and off each day, if manually controlled.

(2) The time the daily check of proper operation of the tower lights was made, if an automatic alarm system is not employed.

(3) In the event of any observed or otherwise known failure of a tower light:

(i) Nature of such failure.

(ii) Date and time the failure was observed or otherwise noted.

(iii) Date, time, and nature of the adjustments, repairs, or replacements made.

(iv) Identification of Flight Service Station (Federal Aviation Administration) notified of the failure of any code or rotating beacon light not corrected within 30 minutes, and the date and time such notice was given.

(v) Date and time notice was given to the Flight Service Station (Federal Aviation Administration) that the required illumination was resumed.

(4) Upon completion of the 3-month periodic inspection required by § 78.63(c):

(i) The date of the inspection and the condition of all tower lights and associated tower lighting control devices, indicators, and alarm systems.

(ii) Any adjustments, replacements, or repairs made to insure compliance with the lighting requirements and the date such adjustments, replacements, or repairs were made.

(f) For all stations, station record entries shall be made in an orderly and legible manner by the person or persons competent to do so, having actual knowledge of the facts required, who shall sign the station record when starting duty and again when going off duty.

(g) For all stations, no station record or portion thereof shall be erased, obliterated, or willfully destroyed within the period of retention required by rule. Any necessary correction may be made only by the person who made the original entry who shall strike out the erroneous portion, initial the correction made, and show the date the correction was made.

(h) For all stations, station records shall be retained for a period of not less than 2 years. The Commission reserves the right to order retention of station records for a longer period of time. In cases where the licensee or permittee has notice of any claim or complaint, the station record shall be retained until such claim or complaint has been fully satisfied or until the same has been barred by statute limiting the time for filing of suits upon such claims.

[41 FR 29695, July 19, 1976, as amended at 49 FR 20672, May 16, 1984; 50 FR 23422, June 4, 1985]

§ 78.75 Equal employment opportunities.

See Subpart E, Part 76 of this chapter.

[51 FR 9966, Mar. 24, 1986]

Subpart D—Technical Regulations

§ 78.101 Power limitations.

(a) On any authorized frequency, the average power delivered to an antenna shall be the minimum amount of power necessary to carry out the communications desired. In no event shall the average transmitter power or equivalent isotropically radiated power (EIRP) exceed the values specified below.

Frequency band (MHz)	Maximum allowable transmitter power		Maximum allowable EIRP	
	Fixed (W)	Mobile (W)	Fixed (dBW)	Mobile (dBW)
1,990 to 2,110		20.0		
6,425 to 6,525		20.0		+35
6,875 to 7,125		20.0		+35
12,700 to 13,250	5.0	1.5	+55	+45
17,700 to 18,600	10.0		+55	
18,600 to 18,800	[1] 10.0		+35	
18,800 to 19,700	10.0		+55	
31,000 to 31,300	0.05	0.05		

[1] The power delivered to the antenna is limited to −3 dBW.

(b) LDS stations shall use for the visual signal-vestigial sideband AM transmission. When vestigial sideband AM transmission is used the peak power of the visual signal on all channels shall be maintained within 2 dB of equality. The mean power of the aural signal on each channel shall not exceed a level of 7 dB below the peak power of the visual signal.

[45 FR 78694, Nov. 26, 1980, as amended at 52 FR 7144, Mar. 9, 1987]

§ 78.103 Emissions and emission limitations.

(a) A CARS station may be authorized to employ any type of emission, for which there are technical standards incorporated in Subpart D of this part, suitable for the simultaneous transmission of visual and aural television signals.

(b) Any emission appearing on a frequency outside of the channel authorized for a transmitter shall be attenuated below the power of the emission in accordance with the following schedule:

(1) For stations using FM or double sideband AM transmission:

(i) On any frequency above the upper channel limit or below the lower channel limit by between zero and 50 percent of the authorized channel width: At least 25 decibels below the mean power of the emission;

(ii) On any frequency above the upper channel limit or below the lower channel limit by more than 50 percent and up to 150 percent of the authorized channel width: At least 35 decibels below the mean power of the emission; and

(iii) On any frequency above the upper channel limit or below the lower channel limit by more than 150 percent of the authorized channel width: At least 43 + 10 $\log_{10}$ (power in watts) decibels below the mean power of the emission.

(2) For CARS stations using vestigial sideband AM transmission: At least 50 decibels below the peak power of the emission.

(c) For operation in the 17.7.7-19.7 GHz band:

The mean power of any emission shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

(1) When using frequency modulation:

(i) On any frequency removed from the assigned (center) frequency by more than 50% up to and including 100% of the authorized bandwidth: At least 25 dB;

(ii) On any frequency removed from the assigned (center) frequency by more than 100% up to and including 250% of the authorized bandwidth: At least 35 dB;

(iii) On any frequency removed from the assigned (center) frequency by more than 250% of the authorized bandwidth: At least $43 + 10 \log 10$ (mean output power in watts) dB, or 80 dB, whichever is the lesser attenuation.

(2) When using digital modulation:

(i) In any 1 MHz band, the center frequency of which is removed from the assigned frequency by more than 50% up to and including 250% of the authorized bandwidth: As specified by the following equation but in no event less than 11 dB.

$$A = 11 + 0.4 (P-50) + 10 \log_{10} B$$

where:

A = Attenuation (in dB) below the mean output power level.

P = Percent removed from the carrier frequency.

B = Authorized bandwidth in MHz.

[Attenuation greater than 56 decibels is not required.]

(ii) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250% of the authorized bandwidth: At least $43 = 10 \log_{10}$ (mean output power in watts) dB, or 80 dB, whichever is the lesser attenuation.

(3) Amplitude Modulation:

For vestigial sideband AM video: On any frequency removed from the center frequency of the authorized band by more than 50%: at least 50 dB below peak power of the emission.

(d) In the event that interference to other stations is caused by emissions outside the authorized channel, the Commission may require greater attenuation than that specified in paragraph (b) of this section.

(e) The maximum bandwidth that will be authorized per frequency assignment is set out in the table that follows. Regardless of the maximum authorized bandwidth specified for each frequency band, the Commission reserves the right to issue a license for less than the maximum bandwidth if it appears that a bandwidth less than the maximum would be sufficient to support an applicant's intended communications.

Frequency band (MHz)	Maximum authorized bandwidth (MHz)
1,990 to 2,110	17 or 18.
6,425 to 6,525	8 or 25.
6,875 to 7,125	25.
12,700 to 13,250	25.
17,700 to 19,700	80.
31,000 to 31,300	25 or 50.

[37 FR 3292, Feb. 12, 1972, as amended at 37 FR 15927, Aug. 8, 1972; 38 FR 16648, June 25, 1973; 39 FR 26025, July 16, 1974; 48 FR 50736, Nov. 3, 1983; 49 FR 37779, Sept. 26, 1984; 52 FR 7145, Mar. 9, 1987]

§ 78.104 Authorized bandwidth and emission designator.

(a) The authorized bandwidth permitted to be used by a CARS station and specified in the station license shall be the occupied or necessary bandwidth, whichever is greater, except when otherwise authorized by the Commission in accordance with paragraph (b) of this section.

(b) As an exception to the provision of paragraph (a) of this section, the Commission may approve requests to base the authorized bandwidth for the station on the lesser of the occupied or necessary bandwidth where a persuasive showing is made that:

(1) The frequency stability of the transmitting equipment to be used will permit compliance with § 78.103(b)(1) and, additionally, will permit 99 percent of the total radiated power to be

cept within the frequency limits of the assigned channel.

(c) The emission designator shall be specified in terms of the necessary bandwidth. (See § 2.201(a) of this chapter.)

[39 FR 26025, July 16, 1974, as amended at 45 FR 78694, Nov. 26, 1980]

§ 78.105 Antenna systems.

(a) For fixed stations operating in the 12.7-13.2 and 17.7-19.07 GHz bands, and for fixed and mobile stations operating in the 31.0-31.3 GHz bands, the following standards apply:

(1) Fixed CARS stations shall use directional antennas that meet performance standards indicated in the following table. Upon adequate showing of need to serve a larger sector, or more than a single sector, greater beamwidth or multiple antennas may be authorized. Applicants shall request and authorization for the stations in this service will specify the polarization of each transmitted signal.

ANTENNA STANDARDS

Frequency (MHz)	Category	Maximum beamwidth to 3 dB points (included angle in degrees)	Minimum antenna gain (dBi)	Minimum radiation suppression to angle in degrees from centerline of main beam in decibels						
				5° to 10°	10° to 15°	15° to 20°	20° to 30°	30° to 100°	100° to 140°	140° to 180°
12,700 to 13,250	A	1.0	n/a	23	28	35	39	41	42	50
	B	2.0	n/a	20	25	28	30	32	37	47
17,700 to 19,700	A	n/a	38.0	25	29	33	36	42	55	55
	B	n/a	38.0	20	24	28	32	35	36	36
31,000 to 31,300 [2]	NA	[1] 4.0	38.0							
38,600 to 40,000	A	n/a	38.0	25	29	33	36	42	55	55
	B	n/a	38.0	20	24	28	32	35	36	36

[1] The minimum front-to-back ratio shall be 38 dBi.

[2] Mobile, except aeronautical mobile, stations need not comply with these standards.

NOTE: Stations must employ an antenna that meets the performance standards for category A, except that in areas not subject to frequency congestion antennas meeting standards for category B may be employed. Note, however, that the Commission may require the use of a high performance antenna where interference problems can be resolved by the use of such antennas.

(2) New periscope antenna systems will be authorized upon a certification that the radiation, in a horizontal plane, from an illuminating antenna and reflector combination meets or exceeds the antenna standards of this section. This provision similarly applies to passive repeaters employed to redirect or repeat the signal from a station's directional antenna system.

(3) The choice of receiving antennas is left to the discretion of the licensee. However, licensees will not be protected from interference which results from the use of antennas with poorer performance than defined in paragraph (a) of this section.

(4) The transmitting antenna system of stations employing maximum equivalent isotropically radiated power exceeding +45 dBW in the frequency band between 12.70 and 12.75 GHz shall be oriented so that the direction of maximum radiation of any antenna shall be at least 1.5° away from the geostationary satellite orbit, taking into account the effect of atmospheric refractions.[1]

(5) Pickup stations are not subject to the performance standards herein stated. The provisions of this paragraph are effective for all new applica-

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[1] See Chapter I, Article 1, Section III of the (International) Radio Regulations (Geneva, 1959), as amended, for Technical Characteristics Terms and Definitions. Additional information and methods for calculating azimuths to be avoided may be found in the following: Report 393, International Radio Consultative Committee (C.C.I.R.); "Geostationary Orbit Avoidance Computer Program," Reort CC-7220, Federal Communications Commission, available from the National Technical Information Service, Springfield, VA 22151, in printed form (PB-211 500) or source card deck (PB-211 501).

tions accepted for filing after October 1, 1981.

(b) Any fixed station licensed pursuant to applications accepted for filing prior to October 1, 1981, may continue to use its existing antenna system, subject to periodic renewal until October 1, 1991. After October 1, 1991, all licensees are to use antenna systems in conformance to the standards of this section. CARS stations located in areas subject to frequency congestion are to employ a category A antenna when:

(1) A showing by an applicant of a new CAR service or TV auxiliary broadcast, which shares the 12.7-13.20 GHz band with CARS, indicates that use of a category B antenna limits a proposed project because of interference, and

(2) That use of a category A antenna will remedy the interference thus allowing the project to be realized.

(c) As an exception to the provisions of this section, the FCC may approve requests for use of periscope antenna systems where a persuasive showing is made that no frequency conflicts exist in the area of proposed use. Such approvals shall be conditioned to require conversion to a standard antenna as required in paragraph (a) of this section when an applicant of a new TV auxiliary broadcast or Cable Television Relay station indicates that the use of the existing antenna system will cause interference and the use of a category A or B antenna will remedy the interference.

(d) As a further exception to the provision of paragraph (a) of this section the Commission may approve antenna systems not conforming to the technical standards where a persuasive showing is made that:

(1) Indicates in detail why an antenna system complying with the requirements of paragraph (a) of this section cannot be installed, and

(2) Includes a statement indicating that frequency coordination as required in § 78.18a was accomplished.

[45 FR 78694, Nov. 26, 1980, as amended at 49 FR 37779, Sept. 26, 1984; 50 FR 7343, Feb. 22, 1985; 51 FR 19841, June 3, 1986]

§ 78.106 Interferences to geostationary-satellites.

These limitations are necessary to minimize the probability of harmful interference to reception in the bands 2655-2690 MHz, 5850-7075 MHz, and 12.7-13.25 GHz on board geostationary space stations in the fixed-satellite service (part 25). Facilities authorized prior to July 1, 1978 which exceed the power levels in paragraphs (a) and (b) of this section are permitted to operate indefinitely, provided that the operation of such facilities does not result in harmful interference to reception in these band on board geostationary space stations.

(a) *2655 to 2690 MHz and 5850 to 7075 MHz.* No directional transmitting antenna utilized by a fixed station operating in these bands shall be aimed within 2 degrees of the geostationary-satellite orbit, taking into account atmospheric refraction. However, exception may be made in unusual circumstances upon a showing that there is no reasonable alternative to the transmission path proposed. If there is no evidence that such exception would cause possible harmful interference to an authorized satellite system, said transmission path may be authorized on waiver basis where the maximum value of the equivalent isotropically radiated power (EIRP) does not exceed:

(1) +47 dBW for any antenna beam directed within 0.5 degrees of the stationary satellite orbit or

(2) +47 to +55 dBW, on a linear decibel scale (8 dB per degree) for any antenna beam directed between 0.5 degrees and 1.5 degrees of the stationary orbit.

(b) *12.7-13.25 GHz.* No directional transmitting antenna utilized by a fixed station operating in this band shall be aimed within 1.5 degrees of the geostationary-satellite orbit, taking into account atmospheric refraction. However, exception may be made in unusual circumstances upon a showing that there is no reasonable alternative to the transmission path proposed. If there is no evidence that such exception would cause possible harmful interference to an authorized satellite system, said transmission path may be authorized on waiver basis where the maximum value of the equivalent isotropically radiated power (EIRP) does not exceed +45 dBW for any antenna beam directed within 1.5 degrees of the stationary satellite orbit.

(c) Methods for calculating the azimuths to be avoided may be found in: CCIR Report No. 393 (Green Books), New Delhi, 1970; in "Radio-Relay Antenna Pointing for controlled Interference With Geostationary-Satellites" by C.W. Lundgren and A.S. May, *Bell System Technical Journal*, Vol. 48, No. 10, pp. 3387-3422, December 1969; and in "Geostationary Orbit Avoidance Computer Program" by Richard G. Gould, Common Carrier Bureau Report CC-7201, FCC, Washington, DC, 1972. This latter report is available through the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22151, in printed form (PB-211 500) or source card deck (PB-211 501).

[52 FR 7145, Mar. 9, 1987]

§ 78.107 Equipment and installation.

(a) From time to time the Commission publishes a revised list of type approved, type accepted and certain notified equipment entitled "Radio Equipment List". Copies of this list are available for inspection at the Commission's office in Washington, DC and at each of its field offices.

(b) Applications for new cable television relay stations, other than fixed stations, will not be accepted unless the equipment specified therein has been type accepted. In the case of fixed stations, the equipment must be either type accepted or notified for use pursuant to the provisions of this subpart. As of March 5, 1984, transmitters designed to be used exclusively with fixed stations shall be approved under notification (see § 2.904(d) of this chapter). Transmitters designed for use in the 31.0 to 31.3 GHz band shall be authorized under the notification procedure.

(1) All transmitters first licensed or marketed shall comply with technical standards of this subpart. This paragraph (b)(1) of this section is effective October 1, 1981.

(2) Neither type acceptance nor notification is required for the following transmitters:

(i) Those which have an output power not greater than 250 mW and which are used in a CARS pickup station operating in the 12.7-13.2 GHz band; and

(ii) Those used under a developmental authorization.

(c) Cable television relay station transmitting equipment authorized to be used pursuant to an application accepted for filing prior to October 1, 1981, may continue to be used, provided, that if operation of such equipment causes harmful interference due to its failure to comply with the technical standards set forth in this subpart the Commission may, at its discretion, require the licensee to take such corrective action as is necessary to eliminate the interference.

(d) The installation of a CARS station shall be made by or under the immediate supervision of a qualified engineer. Any tests or adjustments requiring the radiation of signals and which could result in improper operation shall be conducted by or under the immediate supervision of a person with required knowledge and skill to perform such tasks.

(e) Simple repairs such as the replacement of tubes, fuses, or other plug-in components which require no particular skill may be made by an unskilled person. Repairs requiring replacement of attached components or the adjustment of critical circuits or corroborative measurements shall be made only by a person with required knowledge and skill to perform such tasks.

[37 FR 3292, Feb. 12, 1972, as amended at 45 FR 78695, Nov. 26, 1980; 49 FR 4001, Feb. 1, 1984; 49 FR 20672, May 16, 1984; 50 FR 7343, Feb. 22, 1985]

§ 78.108 Minimum path lengths for fixed links.

(a) The distance between end points of a fixed link must equal or exceed the value set forth in the table below or the EIRP must be reduced in accordance with the equation set forth below.

Frequency band (MHz)	Minimum path length (km)
12,200 to 13,250	5
Above 17,700	N/A

(b) For paths shorter than those specified in the Table, the EIRP shall not exceed the value derived from the following equation.

EIRP = 30-20 log [A/B], dBW

Where:

EIRP = equivalent isotropic radiated power in dBW.

A = Minimum path length from the Table for the frequency band in kilometers.

B = The actual path length in kilometers.

(c) Upon an appropriate technical showing, applicants and licensees unable to meet the minimum path length requirement may be granted an exception to these requirements.

NOTE: Links authorized prior to April 1, 1987, are excluded from this requirement, except that, effective April 1, 1992, the Commission will require compliance with the criteria where an existing link would otherwise preclude establishment of a new link.

[52 FR 7145, Mar. 9, 1987]

§ 78.109 Equipment changes.

(a) Formal application is required for any of the following changes:

(1) Any increase in emission bandwidth beyond that authorized;

(2) Any change in the transmitting antenna system of a station, other than a CARS pickup station, including the direction of the main radiation lobe, directive pattern, antenna gain or transmission line;

(3) Any change in the overall height of the antenna system except where notice to the Federal Aviation Administration is specifically not required under § 17.14(b) of this chapter.

(4) Any horizontal change in the location of the antenna, other than a CARS pickup station, transmitter.

(5) Any change in the type of modulation;

(6) Any change in the location of a station transmitter, other than a CARS pickup station transmitter, except a move within the same building or upon the tower or mast or a change in the area of operation of a CARS pickup station.

(7) Any change in frequency assignment, including polarization;

(8) Any change in authorized operating power.

(b) Other equipment changes not specifically referred to in paragraph (a) of this section may be made at the discretion of the licensee, provided that the Engineer in Charge of the radio district in which the station is located and the Commission in Washington, DC, are notified in writing upon the completion of such changes and provided further, that the changes are appropriately reflected in the next application for renewal of licenses of the station.

[37 FR 3292, Feb. 12, 1972, as amended at 38 FR 6827, Mar. 3, 1973; 41 FR 29696, July 19, 1976]

§ 78.111 Frequency tolerance.

Stations in this service shall maintain the carrier frequency of each authorized transmitter to within the following percentage of the assigned frequency.

Frequency band (MHz)	Frequency tolerance	
	Fixed (percent)	Mobile (percent)
1,990 to 2,110		0.005
6,425 to 6,525		0.005
6,875 to 7,125		0.005
12,700 to 13,250 [1]	0.005	0.005
17,700 to 18,820	0.003	
18,820 to 18,920	0.001	
18,920 to 19,700	0.003	
31,000 to 31,300	0.05	0.05

[1] Stations that employing vestigal sideband AM transmissions shall maintain their operating frequency within 0.0005% the visual carrier, and the aural carrier shall be 4.5 MHz ± 1 kHz above the visual carrier frequency.

[52 FR 7145, Mar. 9, 1987]

§ 78.113 Frequency monitors and measurements.

(a) The licensee of each CARS station shall employ a suitable procedure to determine that the carrier frequency of each transmitter is maintained within the tolerance prescribed in § 78.111 at all times. The determination shall be made, and the results thereof entered in the station records when a transmitter is initially installed; when any change is made in a transmitter which may affect the carrier frequency or the stability thereof; or in any case at intervals not exceeding one year.

(b) The choice of apparatus to measure the operating frequency is left to the discretion of the licensee. However, failure of the apparatus to detect departures of the operating frequency in excess of the prescribed tolerance will not be deemed an acceptable excuse for the violation.

[37 FR 3292, Feb. 12, 1972, as amended at 41 FR 29696, July 19, 1976; 50 FR 23422, June 4, 1985]

§78.115 Modulation limits.

(a) If amplitude modulation is employed, negative modulation peaks shall not exceed 100 percent modulation.

[37 FR 3292, Feb. 12, 1972, as amended at 45 FR 78696, Nov. 26, 1980]

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Table of OMB Control Numbers

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408 OMB control numbers assigned pursuant to the Paperwork Reduction Act.

a) *Purpose.* This section collects and splays the control numbers assigned information collection requirements the Commission by the Office of anagement and Budget pursuant to e Paperwork Reduction Act of 1980, b. L. 96-511. The Commission innds that this section comply with e requirements of section 3507(f) of e Paperwork Reduction Act, which quires that agencies display a curnt control number assigned by the rector of the Office of Management d Budget ("OMB") for each agency formation collection requirement. MB control numbers assigned to mmission forms are not listed in is section since those numbers pear on the forms.

b) *Display.*

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(Sec. 4(i), Communications Act of 1934, as amended; 47 CFR 0.231(d))

[49 FR 18306, Apr. 30, 1984, as amended at 50 FR 9632, Mar. 11, 1985; 51 FR 12157, Apr. 9, 1986; 51 FR 34619, Sept. 30, 1986; 52 FR 35918, Sept. 24, 1987; 53 FR 5184, Feb. 22, 1988; 53 FR 6916, Mar. 3, 1988; 54 FR 3038, Jan. 23, 1989; 54 FR 35650, Aug. 29, 1989; 55 FR 39277, Sept. 26, 1990]

List of CFR Sections Affected

All changes in this volume of the Code of Federal Regulations which were made by documents published in the FEDERAL REGISTER since January 1, 1973, are enumerated in the following list. Entries indicate the nature of the changes effected. Page numbers refer to FEDERAL REGISTER pages. The user should consult the entries for chapters and parts as well as sections for revisions.

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